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Want Casein Put Back On Free List

Martin Cantine, of Saugerties, N. Y., Chairman of the Committee of Coated Paper Manufacturers of the American Paper and Pulp Association Presents Arguments Before the Ways and Means Committee of the House at Washington As To Why the Present Duty of 2½ Cents Per Pound Should Be Taken Off

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., January 7, 1929.—Martin Cantine, of Saugerties, N. Y., appeared before the Ways and Means Committee of the House today in connection with the tariff on casein as chairman of the Committee of Coated Paper Manufacturers of the American Paper and Pulp Association and asked that the present rate of 2½ cents per pound be taken off casein and that it be put back on the free list. Mr. Cantine was accompanied to Washington by Major O. M. Porter, secretary of the Association.

Mr. Cantine told the committee that more than 75 per cent of all the casein, both domestic and imported, is used in the manufacture of coated papers and wall papers.

"A duty of 2½ cents per pound was enacted in the Tariff Act of 1922, and has worked hardship upon the coated paper industry of the United States," said Mr. Cantine.

He called attention to the fact that previous to the Act of 1922 "Casein was justifiably always on the free list." It was left on the free list of 1923 as reported out by the Ways and Means Committee and as passed by the House but the Finance Committee of the Senate, said Mr. Cantine, put a duty of 4 cents per pound on it, which was later reduced to 2½ cents where it stood when the law was signed.

An Investment of $100,000,000

Mr. Cantine then went into a statement of the coated paper industry of the country telling the committee that it represents an investment of approximately $100,000,000 and gives direct employment to over 17,500 workers.

"Approximately 75 per cent of all the casein consumed in the United States is used," continued Mr. Cantine, "in the manufacture of coated paper and wall paper, and is absolutely essential so far as high grade printing and lithographing papers are concerned.

"For the past twenty years casein has been used almost exclusively for the process of coating high grade papers, and so far it has been impossible, after diligent research through every possible scientific source, as well as with government cooperation, to substitute other raw materials to maintain the quality of paper that is now demanded by modern printing and the public and particularly the quality that will successfully compete with foreign papers."

Mr. Cantine told the committee that at no time have any charges or implications been made by the most ardent supporters of a duty on casein that there has been any evidence of dumping, unfair competition, or other practices, aimed to impair or destroy domestic industries, nor were any such practices found by the Tariff Commission when it made an investigation of the casein-tariff.

In concluding his testimony Mr. Cantine said:

"The customary acceptance of the purpose of a tariff is where its operation affects the major interests in the specific article. Is it not wiser to protect the interests of more numerous industries using casein as a raw material, than to levy a duty for a group which it has been proven is not at all affected by the existing conditions of the domestic market?

"The Tariff Commission in its report has found that the importations of casein do not materially affect the domestic dairymen and casein manufacturers' prices, and it has been pointed out that the existing tariff has only proven to work a hardship upon a specific class of manufacturers; that of coated paper.

"It seems incredible to believe that any commission or legislative body would impose the hardship of a duty on a commodity which, it has proven, is most necessary for its manufacture and which cannot be accomplished by the domestic production and which duty only tends to increase the cost to the domestic consumer of the finished product in which this imported commodity is used.

"Therefore, we contend that in view of the facts submitted, the existing duty on casein is economically unsound and should be removed."

Paper Box Plant Doubled in Size

SPRINGFIELD, Mass., January 7, 1929.—Sample-Durick Company, manufacturer and printer of collapsible paper boxes, 370 Birnie avenue, is doubling its floor space by occupying the quarters directly alongside in the same building, formerly used by the Loose-Wiles Biscuit Company. This gives the company approximately 30,000 square feet of floor space, and admits of a more advantageous arrangement for a rapid output of work. For several years this concern has run 24 hours a day, and it is believed that that arrangement may continue, even with the greater capacity afforded for day work. The interior of the old biscuit warehouse has been entirely rebuilt for its new occupant, and an opening made to connect with the older half of the plant. A lease for the combined floor space running to 1933 has been signed.

Along with the doubling of the space the plant equipment also is being virtually doubled by the installation of new printing, cutting and creasing machinery. The number of customers has been considerably increased of late, it is said, and the uses for paper boxes made in the establishment covers a wide range. All the containers for one of the leading makes of ball-bearings are made there, also boxes for nationally-known sporting goods and toothbrush concerns, boxes for radio tubes, incandescent lamps, drinking cups, ice cream cones, paper napkins, and so on.

International May Erect Paper Mill at Nipigon

Option on McKirdy Property Taken Up and New Plant Will Probably Be Built Thereon—Among Other Advantages the New Mill Would Be Close to Source of Pulpwood—Site Fronts on Nipigon Bay and New Town May Be Established Close to Works

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., January 7, 1929.—Although not confirmed by Jack McKirdy himself, a report which seems to be well founded is current that the option which the International Paper Company has had on a block of Mr. McKirdy's property, close to Nipigon, has been taken up and that the new paper mill will be built there. With the mill at Nipigon as the nucleus of the plant, the company was inclined to favor that as the site for the new mill, although there were a few drawbacks, such as greater difficulty in securing solid foundation for piling than would have been found in Fort William, and the disadvantage of being remoter from the labor supply than would be the case at either Fort Willam or Port Arthur. However, it seems that the other advantages at Nipigon have outweighed these drawbacks and the mill will be built close to the source of pulpwood. The option on the McKirdy property, which consists of about 160 acres, fronting on Nipigon Bay, known at Lot 9, was given to the paper company early last summer, and has since been twice renewed. The last renewal was due to expire at the end of December. A certain amount of cash was paid in order to secure the renewals and the total price, said to be $10,900, it is understood, has been handed over. The existing pulp mill is situated on parts of lots 10 and 11 and the McKirdy property lies due south of the adjoining lot 10. Thus the building of the mill on Lot 9 will place it in convenient relation to the pulp mill. The site lies almost exactly two miles from the present town of Nipigon and it is expected that the advent of the plant of the International Paper Company will result in a new town site being established closer to the works than the present town site.

Assessment of Riordan Mills Reduced

County Judge John S. Campbell has reduced the assessment of the Riordan Paper Mills at Merritton, Ont., owned by the International Paper Company, to $41,960. The buildings, which have been idle since taken over by the International some years ago, were assessed for $119,000, and the land at $7,000. The International claimed the buildings were of no use for manufacturing pulp or anything else, being antique, and the land would be better without them. They brought prominent valuators to testify to this at the hearing of the appeal. The judge in his judgment said he hesitated on the point that the buildings were good for no other purpose.

Minister Sounds Note of Warning

The Hon. Charles Stewart, Minister of the Interior at Ottawa, in a recent interview on the subject of Canada's forest industries, sounds a warning note that the time has come in the Dominian for a national stock-taking of the forest resources and the review of forest management. Dealing with the development of the timber and pulpwood industries of Canada the Minister said in part: "The set-back experienced by the pulp and paper industry was the one drawback which served to slow down somewhat that general increase in national prosperity of which we are all so proud. This set-back resulted from an accute state of over-production, following upon the ill-considered and too hasty expansion of mills capacity. The occasion demands serious consideration of the whole basis of pulp and paper manufacture, having regard on the one hand to market requirements, present and prospective, and on the other hand to the availability of supplies of raw material adequate to ensure perpetuation of the industry. The Dominion Government, despite some opposition, had resisted during the past few years, persistent demands for the granting in Manitoba of additional pulpwood concessions on a large scale. The Federal policy had been to go slowly in this matter until it could be demonstrated that the pulpwood resources and the markets for paper warranted a further increase in productive capacity of the industry in Canada. The wisdom of this policy had been amply justified during the year."

News Print Leaders Still Negotiating

The news print leaders, who have been negotiating for some time with a view to settling the vexed question of price and production in the news print industry, have not yet completed their labors and doubt still exists as to what has been or is being effected. It is understood that the mills are doing better than they were in the early part of the year, and it will be recalled that the recent publication output figures showed that the best percentage of the year was shown in November. There is no indication of any cessation in the demand for news print paper other than seasonal, and it is claimed by the manufacturers that if they can manage to stabilize the price on a basis which would afford the industry a somewhat better profit than the cut-outs recently reported, conditions might improve a great deal faster than the general run of people in the street seem to imagine. Some think it will take three to five years to get rid of the evil effects of over-production, but this estimate they think, might have to be modified.

Mersey Paper Co. Awards Contract

Foster Wheeler, Ltd., of St. Catherines, Ont., where its works are located, and with its head office at Toronto, has just been awarded the contract to manufacture and install three complete steam generating units for the Liverpool, Nova Scotia, mill of the Mersey Paper Company. Units will consist of three 900 h.p. boilers, Foster Super Heaters, Foster Waterwall Furnaces, Foster Plate Type Sectional Air Pre-Heaters, aero unit pulverized fuel equipment, all auxiliaries and stack. George F. Hardy, the consulting engineer in the works, was also consulting engineer for the Spruce Falls Pulp and Paper Company, whose steam plant, equipped throughout with Foster Wheeler equipment, has been in operation for several months.

Heavy Pulpwood Cut Near Hearst

During the present season some 100,000 cords of pulpwood will be cut along the line of the Algoma Central and Hudson Bay Railway, principally between Franz and Hearst, providing weather conditions are favorable. This is regarded as a good average cut. There are three paper companies engaged in woods operations in the area mentioned—the Abitibi Company, Northern Paper Company at Coppell, and the Newago Company at Hale. In addition to these there are a number of jobbers, and the settlers also cut pulpwood on their lands. The shipments of wood which supply tonnage for the railway come to the Soo, some goes east and a portion of it goes across the border. The weather just now is quite suitable for cutting but there is little snow along the lines for hauling operations. Considerable snow or rain is required for the spring drive, but the operators are not worrying about this, as sufficient snow generally comes in January for the purpose.

Notes of the Ontario Paper Mills

The Don Valley Paper Company, Ltd., and the Valleyfield Coated Paper Mills, Ltd., have arranged to operate a joint sales office at 56 King street West, Toronto, where the present sales office of the Don Valley Paper Company is located. H. A. Rawsthorne, who is in charge of the present Toronto Sales office of the Valleyfield Coated Paper Mills, will continue to handle the Valley-

field product exclusively as heretofore in Toronto, but he will also give a certain amount of attention to the business of the Don Valley Paper Company.

Night classes in elementary mathematics and English have been started at Smoth Rock Falls, Ont. Other subjects, including mechanical drawing, are to be added to the curriculum. Employees of the Abitibi company attending seventy-five per cent of the classes—not counting absence due to shift work—will be reimbursed the $3 registration fee.

D. Merchant, of the paper mill department at Iroquois Falls, Ont., has gone to his home in Sturgeon Falls to take a position in the Sturgeon Falls Division of the Abitibi Power and Paper Company, Ltd.

Major Allan Laferriere, industrial commissioner of the City of Hull, received a letter a few days ago from the Mohawk Valley Paper Company, of Little Falls, N. Y., asking the price of power in 500, 1,000 and 1,500 h.p. lots. The officials of the company stated in their communication that one of the subsidiaries was studying the question of transferring their plant on account of the high cost of power at Little Falls.

Dr. Robert Boyd, late contracting physician for the Fort William Paper Company, the Great Lakes Paper Mill Construction Company, and many other operations connected with the woods in Northern Ontario, died a few days ago in the McKellar Hospital, Fort William, Ont. The late Dr. Boyd was the first physician at the head of the lakes to inaugurate the medical inspection of employees, prior to their employment. The system has been in operation in the past two years among the employees of the Backus-Brooks Company.

I. H. Boas, of Melbourne, Australia, who is the chief of the division of forests products and of the council of research in that country, recently arrived in Ottawa. He says that the export of paper from Canada to Australia will soon meet with stiff competition among the paper makers of Australia. After years of experimentation Australia has succeeded, according to Mr. Boas, in converting its hardwoods into a high grade of paper, a process which a few years ago was considered almost impossible. Mr. Boas is conferring with the Government officials regarding forest conservation methods and is of the opinion that both Canada and Australia waste huge quantities of forest products each year and can learn much from European countries in this regard.

A provincial charter has been granted Scott and Lusk to carry on the business of manufacturing pulpwood and paper, with an authorized capital of $40,000 and head office at Tache, L'islet County, in the district of Montmagny.

D. Kemp Edwards, Ltd., Ottawa, have acquired the retail lumber interests of the Canadian International Paper Company at Ottawa. The purchase includes stock located on the Canadian International Paper Company property on Susses street, Ottawa, and the company's property at Eastview, Ont. William Schryer, former manager of the Canadian International Paper Company at Eastview, has been appointed manager of the new operations.

The Chamber of Commerce, Midland, Ont., recently sent a communication to the International Fibreboard Company, Ltd., Gatineau, making inquiries regarding when the Ten-test plant would reopen at Midland. President H. J. Wiser stated that the commencement of operation of the International Fibreboard Company gave the company greatly increased production and naturally the market could not absorb this right away. However, he stated that encouraging strides toward absorption of this extra output had been made and he had great hopes of resuming activities at the Midland plant some time in January.

Arrowhead Mills Sold

FULTON, N. Y., January 7, 1929.—The Arrowhead Mills, Inc., of this place, it is authoritatively reported have been sold, the deal being closed on December 31, 1928. The names of the purchasers and other details, however, have not as yet been disclosed.

Acquires the Warner & Childs Co., Inc.

On January 2, the Robert Gair Company, New York City, merged the Warner & Childs Company, Inc., Medford, Mass., one of the oldest leaders in the manufacture of corrugated board products in New England, thereby completing a chain of plants superlatively located for economical eastern distribution and, what is specifically important to the buyer or Corrugated Cases, quick service.

R. M. Taylor, president of the Warner & Childs Company, Inc., will not only continue in its management, but will assume more extended activities in the Gair organization. The personnel of the Warner & Childs Company, Inc., will be kept intact, and the policies which have given it a high repute in New England will be maintained.

The other corrugated board products factories of the Robert Gair Company are at New London, Conn., the parent plant which extends one-quarter of a mile along the Thames River, and the recently acquired factory of the Interstate Corrugated Box Company, Inc., at Brooklyn, N. Y., which serves Metropolitan New York. The organization, as regards material, is thoroughly self-contained. Its jute liners are manufactured at the Thames River Division, New London, Conn., at the Tonawanda Division, Tonawanda, N. Y., and its straw paper is supplied by the Quincy Division, Quincy, Ill. The Robert Gair Company's folding carton plant and box board mill are located at Piermont, N. Y., and its Haverhill Division at Haverhill, Mass., serves New England with box boards of various grades. The capacity of the Gair Box board mills exceeds one thousand tons daily.

R. T. Houk, Jr., Heads Mead Co.

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, January 7, 1929.—R. T. Houk, Jr., for eight years vice-president and sales manager of the George H. Mead Company, has been promoted to the presidency of the concern, it was announced here this week, following a meeting of the board of directors in the City National building, Third street. George H. Mead, former president, was made chairman of the Board.

Mr. Houk's promotion was made effective at once and he assumes control of the entire concern, the largest distributor of news print in the country.

The Mead Company controls a number of Canadian paper mills and has lumber rights on thousands of square miles of Canadian timberland.

Mr. Houk spent three years in Canadian paper mills, following his graduation from college in 1913. Later he spent two years in New York studying the business end of the company. He has been employed in the Dayton offices of the company for more than ten years, during eight years being the vice-president and sales manager.

Mr. and Mrs. Houk reside in Oakwood, Dayton's exclusive residential section.

To Manage St. Regis Timber Lands

[FROM OUR REGULAR CORRESPONDENT]

HARRISVILLE, N. Y., January 7, 1929.—The St. Regis Paper Company has announced the appointment of A. P. McKinnon, of Montreal, to the position as general manager of all timber lands of the company in the United States and Canada. For several years past he has been in charge of the Canadian interests of the company and his promotion is a well deserved one. Up until this time Carl B. Martin, secretary of the company, has been in charge of the timber property in this country but he was recently transferred from the Watertown offices to New York and consequently it was found that he would not be able to devote the proper time to this section of the business. Mr. McKinnon was in this district during the past week and visited the mills of the company with C. T. Jewell, general manager. He plans to move from Montreal to New York City within the near future.

Paper Mill Developments in Fox River Valley

New Finishing Room, Shipping Room, Bleaching Plant and Clay Treating Plant of Consolidated Water Power & Paper Co., At Wisconsin Rapids, Nearing Completion—Harshberger-Theilacker Co. To Establish New Roofing Plant at Milwaukee

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., January 7, 1929.—Enough capital has been assured so that the new roofing plant of the Harshberger-Theilacker Company can be established at Milwaukee, Wis. With the assistance given by the Milwaukee Association of Commerce, a total of $275,000 has been raised among Milwaukee capitalists.

Arrangements will now be made either to buy or erect a suitable building to begin the manufacture of composition roofing. Patents held by Norman P. Harshberger will be used, especially with regard to the design of shingles so as to avoid waste.

New Appleton Machine Plant Nearly Ready

Part of the equipment is being moved into the large new foundry building of the Appleton Machine Company, Appleton, Wis. All of the exterior is completed and interior work is practically completed except for the main foundry. Within a few weeks the plant will be in full operation, and the old foundry then will be remodeled for an assembling unit. The new building is of brick, concrete and steel and typifies the most modern type of foundry.

Construction Work Progresses at Wisconsin Rapids

Installation of interior equipment is all that remains before operations can be started in the new finishing room, shipping room, bleaching plant and clay treating plants of the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. All of the construction work has been completed. The main shipping unit is 97 by 144 feet in size, and is of brick, steel and concrete construction. It is expected that the installation of machinery will consume about a month, after which additional men will be added to the crew to take care of increased operations.

Spruce Falls Safety Record

Safety awards totalling $497.50 were distributed recently to employees of three departments of the Spruce Falls Power and Paper Company, of Kapuskasing, Canada, one of the divisions of the Kimberly-Clark Corporation. Checks were given to 104 persons because of the fact that these departments operated for 290 consecutive days without a lost time accident, achieving one hundred "man years" of safety. The plant crew, the office and the town site department were included.

Freight Rates on Tissues Reduced

More equitable freight rates on tissue paper shipped from mills at Green Bay, Wis., are provided by a new order issued by the Interstate Commerce Commission. The rate on toilet paper shipped in carloads from Green Bay to Indianapolis, Ind., is cut from 38.5 cents a hundred pounds to 35 cents, effective February 9, 1929.

This order completes efforts of the mills to obtain schedules that were in comparison with those from other points to Indianapolis. A previous order granted the cut to 35 cents on napkins and towels. Rates on mixed cars of these three commodities were also reduced.

Transcontinental carriers have also agreed to reduce the rate on paper towels, toilet paper and napkins from $1.25 to $1.10 a hundred pounds. A rate of $1.00 was asked by the mills but a compromise was made.

State Owned Forests Advocated

State owned forests will be advocated for Wisconsin as a means of conserving the timber supply. An interim committee of the Wisconsin legislature, headed by Senator George Blanchard, is preparing a report which will embody such recommendations when the 1929 session starts later this month.

This committee has traveled through many states investigating the methods of handling the forest problem, and finds that cut-over lands have frequently been acquired for the growing of timber. It is proposed to utilize lands suitable for forests and not agriculture, and plant them with trees. Bills also will be introduced to increase the personnel of the state forestry commission.

Wisconsin's Pulp Industry Declining

Wisconsin as a pulp producing state is on the decline, according to statistics of the Department of Commerce at Washington. The production in 1927 was 1,199,615 cords of pulpwood, and 694,920 tons of pulp. The previous year the state produced 1,224,443 cords of pulpwood and 712,565 tons of pulp. The dwindling forests are believed to be responsible for this condition, as the mills have been obliged to look to other states and to Canada for their supply.

New Federal Forest District

Extensive reforestation work which is to be undertaken in Wisconsin has caused the establishment of a new federal forestry district in the state with headquarters at Madison, Wis. It will be known as the lake state forestry district of the United States Government and will be in charge of Earl F. Tinker as chief forester. For the time being offices will be located at the United States Forest Products Laboratory.

Wisconsin, Michigan and Minnesota are included in the new district, and eventually Indiana, South Dakota and Ohio will be added. Under the order issued by Secretary of Agriculture J. F. Jardine, there is provided $6,000,000 for expenditure on reforestation.

Wisconsin was made the headquarters because it has the biggest program ahead of any of the states. There are already 1,200,000 acres in this federal unit, and it is expected there will be at least 2,500,000 acres devoted to reforestation in the district.

Previously the administration was carried on from Denver. Mr. Tinker, before coming to Wisconsin, was in charge of forestry work in Colorado and Wyoming.

News of the Industry

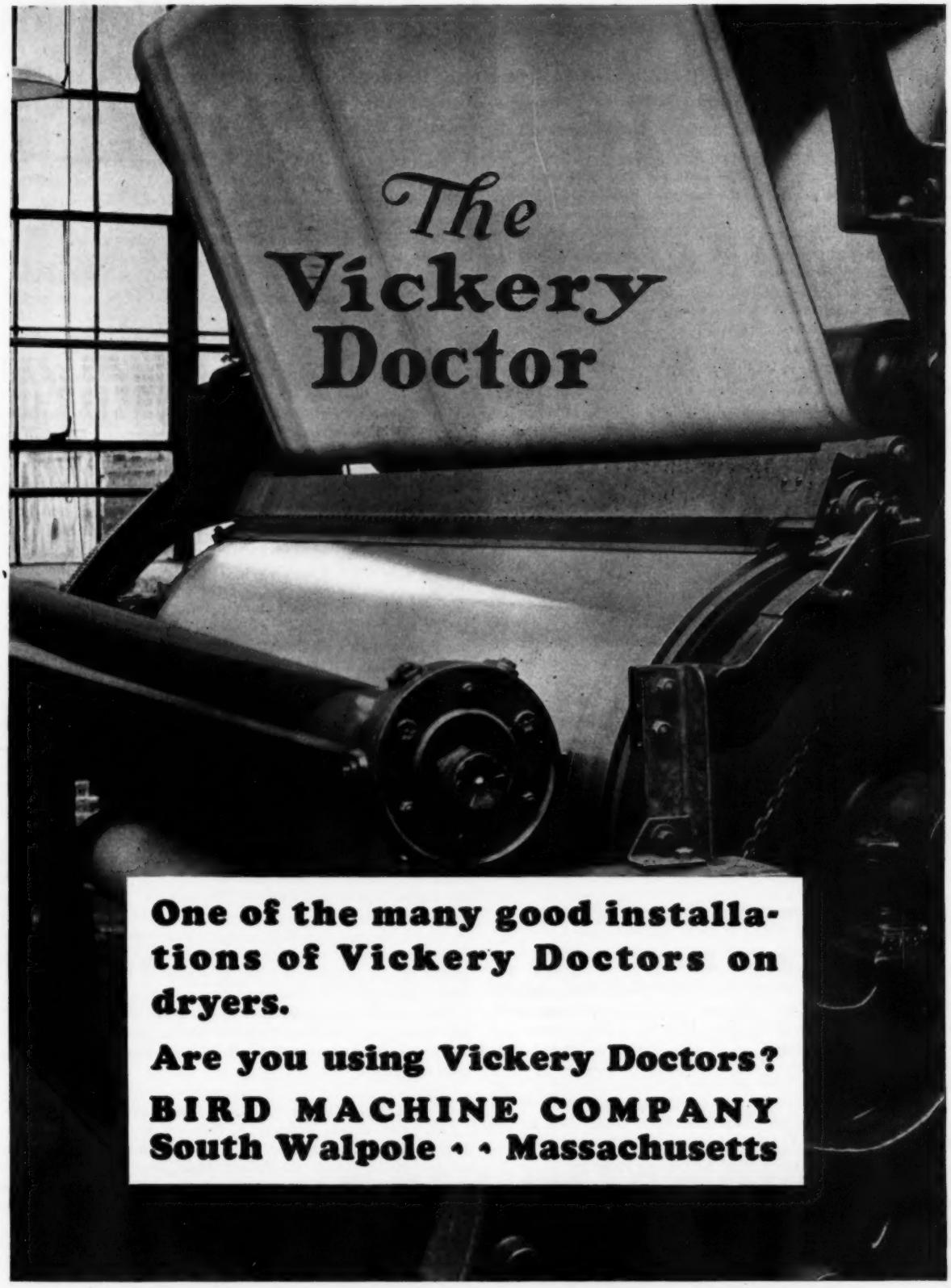
Problems concerning the sale of corrugated cartons were taken up at a meeting recently of twenty salesmen of the Menasha Wooden Ware Corporation, Menasha, Wis. This company established a carton plant about a year ago as an auxiliary to its pail and tub industry. The group inspected the John Strange Paper Company mill at Menasha, where board for the containers is made. They also travelled to Watertown, Wis., where a comparative drop test of boxes was made at the G. B. Lewis Company plant. Boxes were filled with canned goods and placed in an eleven foot steel drum, which was rotated as the boxes were dropped. A banquet was also given the salesmen by the company.

John T. Kieckhefer, president of the Eddy Paper Corporation, Milwaukee, Wis., is one of the organizers of a new investment company at Milwaukee, to be known as the Milwaukee Company. The concern is capitalized at $1,000,000, of which $750,000 will be issued. Several prominent bankers are associated with the organization, and its president is to be Willis Pollock, former vice president of the Second Ward Securities Company.

Work on the new hospital which the Kimberly-Clark Corporation is building at Kapuskasing, Canada, is nearing completion. The hospital is for employees of the company's mill there and their families. It will contain eighty rooms, exclusive of bath rooms, and is of fireproof construction. It will be as modern as any city hospital.

Paper Sales, Ltd., Appointed Sales Agents

DETROIT, Mich., January 7, 1929.—The Detroit Sulphite Pulp and Paper Company of this city announces the appointment of Paper Sales, Ltd., as its exclusive sales agents for Ontario and Eastern Canada.


The
Vickery
Doctor
One of the many good installations of Vickery Doctors on dryers.
Are you using Vickery Doctors?
BIRD MACHINE COMPANY
South Walpole • • Massachusetts

2508

Chicago Paper Market in Satisfactory Position

Despite Inventory Period Sizable Orders Are Being Received by Local Distributors—Mill Representatives Particularly Busy at Present—News Print Situation Shows Signs of Improvement and Contract Business Is Heavier Than of Late

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., January 7, 1929.—Contrary to proceedings that have been somewhat general in the past the Chicago paper market is experiencing a fair run of business during the week immediately following the holiday season. A part of the time is being taken up in the inventory process but otherwise sizable orders are coming in. Especially is this true in the case of mill representatives, who, for the most part, are located in the Conway building.

The news print situation has improved somewhat though there is talk of two and a half and three cent news print in some offices. Contract business is reported heavier and the demand is keeping up well. The grades of paper that experienced a splendid movement during the holiday season are having their temporary reaction at this time—though, in each line, optimism prevails for near future business. Wrapping paper merchants in Chicago report the heaviest and most successful last quarter they have ever had, though the market is somewhat quiet now. Both wrapping paper and tissues moved exceedingly well right up to and including the day before Christmas. Fine papers are temporarily slow but prices are firm and prospects fairly good for the first quarter of 1929. Kraft business is better than was expected for the past week. Waste papers are experiencing the lull that has hit other lines but prices are fairly good and prospects in the paper stock market are reported as favorable.

National Sulphite Association's Activities

There is continued discussion in this section of the activities of the recently formed National Suphite Paper Association which had its first meeting at the Palmer House, Chicago, December 12. At that time twenty-five representatives of the sulphite grades were in attendance at a meeting reported to be of a somwhat preliminary nature. It is understood by a number of well known paper men in Chicago that negotiations are under way for the employing of a permanent secretary for this newly formed organization and though several names have been mentioned none have been listed for publication. It is expected that the National Sulphite Association will act in the nature of a bureau cooperating with each individual member of the association, with the National Paper Trade Association, and other organizations in the paper field, for the benefit of the trade in general.

Jake Seibert Leaves for New York

Jake Seibert, formerly middle western representative of the International Paper Company and recently transferred to the New York offices of that organization, left Chicago for the East immediately after the first of the year and is now actively engaged in taking care of the kraft interests of the International from their main offices in New York City. Miss Ryan, for a number of years Mr. Seibert's secretary, is to have charge of the Chicago office at 30 North LaSalle street, working under Mr. Seibert's direction and cooperating with the four salesmen working in this territory. Although they are still in Chicago the members of Mr. Seibert's family are expected to move to New York in the very near future.

Chicago Salesmen Plan Ambitious Program

The Salesmen's Association of the Paper Industry will have another interesting and valuable program for its annual meeting in New York on February 19, according to Jim Coy, president of the national organization of salesmen. Although the program has not been completely arranged in every detail the banquet and interesting program that has characterized meetings of past years will be considerably enlarged upon and improved. In the meantime the local division of the Salesmen's association, under the leadership of H. R. Knott, of the Eastern Manufacturing Company, is laying plans for approximately fifty meetings in 1929 all of which are expected to be most interesting and educational. In the fall of the past year the progressive organization of salesmen adopted a plan of securing speakers well known in their respective fields to address the regular Monday meetings with the idea of making the salesmen better informed on every phase of the industry and of promoting a closer cooperation among salesmen, manufacturers and distributors. Among those who spoke in 1928 were Noble Gillette, president of the Chicago Paper Company and president of the National Paper Trade Association, and Leo S. Altholz of the Inlander-Steindler Company and president of the Chicago Paper Association. Although the speaker for the January 14 meeting of the Chicago division of salesmen has not yet been announced Mr. Knott is negotiating with two or three any one of which will insure a most successful and interesting program for the first meeting in 1929.

News of the Trade

The quarterly mill price of the West Virginia Pulp and Paper Company as of January 2 has reached that Chicago buying personnel. The price list covers twenty-five grades of paper made by the West Virginia organization. The second cover of the booklet illustrates the ten issues of Westvaco Inspirations for Printers that have been published during 1928. The offer is made to send any missing numbers as well as all subsequent numbers to those sufficiently interested to write for them. Taken altogether, the ten issues of Inspirations for Printers constitute a comprehensive and valuable study of periods of printing and the applications of advertising and printing in vogue during those various periods. All of the issues are extremely well printed, illustrated and edited.

Edgar A. Hall, Jr., general manager of the Pilcher-Hamilton-Daily Company, Chicago, who has resigned effective February 15 to become associated with the Crown-Zellerbach organization, will leave shortly for tthe coast to confer with the officers of that company relative to the duties of his new position. Mr. Hall will return to Chicago about the first of February to conclude his relations with the Pilcher-Hamilton-Daily Company preparatory to his leaving that organization on February 15. The exact location required by Mr. Hall's new connection and the duties involved are as yet not defintely decided upon but it is universally believed in Chicago paper circles, that the popular Chicago paper man is being advanced to a responsible position worthy of his long experience and knowledge of the paper trade.

The regular meeting of the Chicago Paper Association is to be held at the Bismark Hotel Tuesday evening, January 8. An interesting program covering the work of costs and cost operations is to be covered.

Building Ground Wood Plant at Longview

LONGVIEW, Wash., January 4, 1929.—A ground-wood plant is now being installed at the plant of the Longwood Fibre Company the foundation already completed. Machinery is ordered and will begin to arrive about January 15. The grinders will be operated by a 1650-horsepower electric motor, which will be operated by power purchased from the Long-Bell mill.

Approximately 100 tons of fiber board is made at the plant each 24 hours. In the new paper bag factory now under way six machines have started operating out of the nine being installed. Bags ranging in size from the half-pound to 30 pounds are being made.

DOWNINGTOWN Suction Rolls

Kilberry Patent Suction Couch Roll

Partial List of Users:

St. Regis Paper Co.
Frazers, Limited
Mohawk Paper Makers
Calcasieu Paper Co.
Nekoosa-Edwards Co.
Marinette & Menominee
Consolidated Paper Co.
Jessup & Moore Paper Co.
Fort William Paper Co.
Hinde & Dauch Paper Co.
Johns-Manville, Inc.
Deerfield Glassine Co.
Donnaconna Paper Co.
E. B. Eddy Company
Continental Paper & Bag Co.
Laurentide Co., Ltd.
Congoleum-Nairn, Inc.
Hummel-Ross Fibre Corp.
Scott Paper Co.
Louisiana Pulp & Paper Co.
National Asbestos Co.
Beaver Wood Products Co.
Price Brothers, Ltd.

Downingtown put the Kilberry Suction Roll on the market as **no improvements** to the suction rolls in general use, had been made for many years.

Downingtown introduced the small journals and anti-friction bearings now in general use.

Downingtown introduced the direct drive which is a patented feature of our roll, permitting the installation of a suction roll for a plain couch or press roll by coupling direct to the floor drive.

Downingtown introduced a suction roll with a suction box supported by its journals in such a manner that the seal is maintained without adjustment and with a minimum of operating friction.

Downingtown introduced a method of changing the angular position of the suction box by means of an outside adjusting device, while machine is running.

Downingtown introduced the spiral staggered drilling of the holes in the shell which is a standard feature of our roll, thereby increasing the strength of the shell, preventing the cutting or scoring of the packing and the inside surface of the shell, and reducing the marking of the sheet and prolonging the life of the felt.

Downingtown will introduce other features to maintain our suction rolls as the best that can be built.

Downingtown feels that the Paper Industry has benefited largely thru the above suction roll improvements, which were introduced by us.

Downingtown had to undergo the cost of expensive litigation to prove their right to give the above improvements to the Trade. The United States Court of Appeals in a sweeping decision in our favor gives us this right.

Downingtown builds suction couch rolls and suction press rolls by the centrifugal casting process in all sizes, large and small.

Downingtown solicits your inquiries and an opportunity to serve you.

Our Products Meet Our Promises

DOWNINGTOWN Manufacturing Company Downingtown, Pa., U. S. A.

Demand for Book Paper Lively in Philadelphia

Uncoated Grades Quite Active, With Sizable Volume of Orders Secured For Machine Finish, High Bulk, and Antique Finish Stock—Mill Representatives Report Greater Contract Buying of Standard Grades of Paper Than In Preceding Year

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., January 7, 1929.—As inventory occupies the early days of the new year trade is chiefly concerned with the 1928 summary of accounts. It is hoped that there will be a brighter side to the paper market when the final accounting is made. Present indications point to less activity in the local industry than was shown in the preceding year. While distributors have been confined chiefly to small lot shipments, mill representatives reported a greater volume of contract orders during the last weeks of the old year. While much of the contract buying was arranged under terms of deliveries for the current year, the offers of the manufacturers were satisfactorily scaled to meet the requirements of dealers and consumers over broader periods of payments in order to obtain sufficient volume to maintain production and pending an adjustment of the market to stabilized conditions in those grades that have been subjected to keen competition.

Lower margins of profits are anticipated. Those distributors who bought paper at the attractive levels of the early summer weeks when mill inducements were made to stimulate production volume for the duller hot weather period, will fare better than those cautious paper merchants who hesitated to look ahead with stocking requirements to meet the livlier needs of the Fall. The same situation applies to present conditions when mills are making attractive terms to the trade in order to produce sufficient volume of advance purchases to maintain production over the early weeks of the new year. A few far sighted dealers are ready to accept the mills pleas for early buyng and are assured that 1929 business will warrant paper consumption on growing scale as the industrial situation improves. Low inventories are reported by the dealers on the standard grades of year round consumption. A certain amount of slow selling goods in the specialty class have been accumulated and these of course will be subjected to usual odd lot selling when stock taking days are over in an effort to clear out warehouses for restocking.

New Year activities in the paper market are most prominent among wholesalers and mill representatives. There has been a lively demand for book papers, the uncoated grades being in the active list with orders for machine finished, high bulk and antique finish in sizable volume. A fair volume of orders are noted for wrapping grades for delivery under the present day terms of the mills. Twine is uncertain in price with a fair demand for the first days of the current month. Board manufacturers are not as active in the local market as they were a few weeks ago when competitive bidding for tonnage was keen.

While wholesale paper stock dealers have been able to sell all available supplies of book, ledger and white grades of the better class there has been a lesser demand for the commoner lines of cheap paper. A buyers market exists in the low priced lines but terms for the better grades are made by the dealers who have few supplies on hand to meet the constant needs of the manufacturers. Rags are quieter as the market drifts along.

Federal Reserve Reports On Paper

Reports on various commodities and business conditions in the Philadelphia District during the month of November just made public by the Federal Reserve Bank shows that paper sales for 1928 in that month compared with the same period of 1927 among the ten firms reporting, showed a decline of 4.1 per cent over the preceding year when a gain of 5.6 per cent was made. Total sales amounted to $637,314 last November in the firms reported. Among the wholesale paper trade stocks on hand showed a decline of 3.3 per cent over the previous year in November and 3.1 per cent under October of 1928. Accounts outstanding were 0.2 per cent less than October while a gain of 6.8 per cent was made over November of 1927. Ratio of accounts outstanding to sales of November 1928 was 144.3 per cent while collections showed a decline of 1.5 per cent over the same month of 1927 and stood 8.50 per cent less than October of 1928.

Stream Pollution Before Legislature

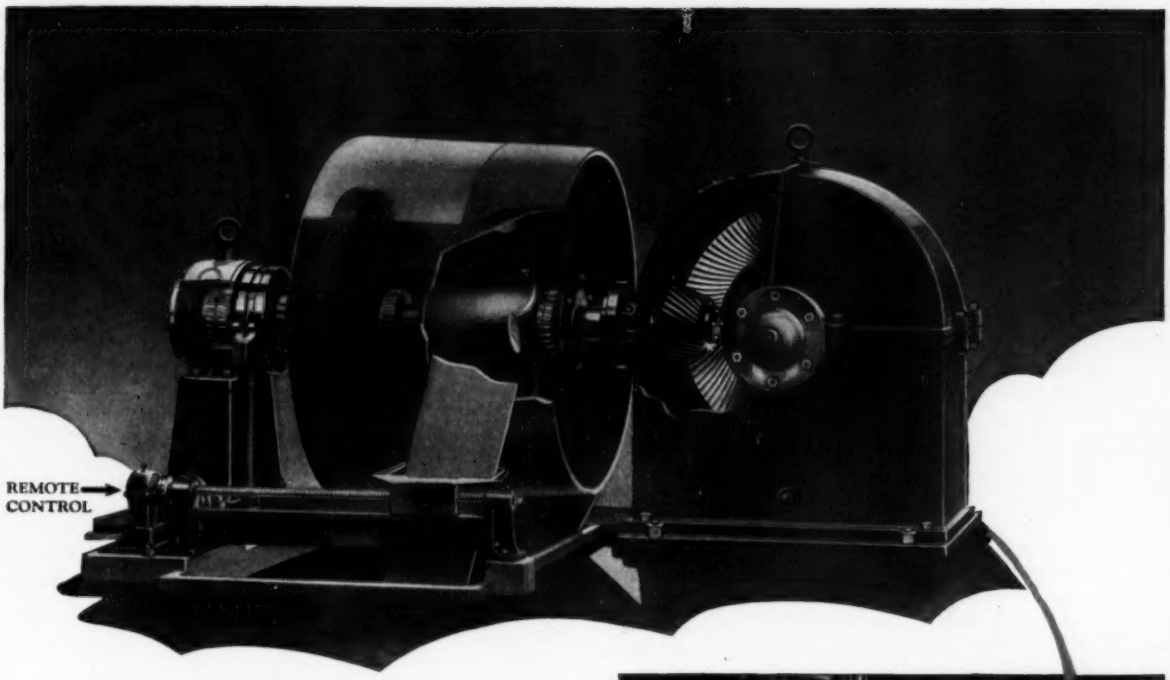
Now that the Pennsylvania Solons have again come into session at the State Capitol at Harrisburg, there is another attempt being made to bring about the passage of the drastic laws which were drawn up by the Isaac Walton League as a means of preventing stream pollution in the State. This matter was brought to the attention of the Legislature when it met two years ago and was strenuously opposed by the Pennsylvania Manufacturers Association acting in conjunction with a Paper Trade Committee appointed by the local industry to bring to the attention of the law makers the harmful influences which the passage of such laws would work upon manufacturers who were subjected to the drastic punishments imposed for violations of the stream regulation act and providing for fine and incarceration in gaol for such infringements. Another large size ruction is scheduled to follow the Anti-Pollution bill when it comes up this term after having been "shelved" at the last meeting two years ago. The new bill to be presented has been drawn up by Grover C. Ladner president of the Conservation Association of the State and allows each community to bring any action to prevent pollution and to obtain injunctions. All of the conservation interests and the farmers are supporting the new bill revamped from the former drastic measures. Like the former bill, it will be opposed by the Pennsylvania Manufacturers Association and its allied committees working for the various industries and particularly a large representation under the Paper Trade body. The New York and Pennsylvania Company, paper manufacturers, of Lock Haven, Pa., are the most active of the paper producers in guarding the welfare of the industry in the pollution legislation. Archibald T. Jones, of Coudersport, Pa., is attorney for the paper manufacturers working in conjunction with C. W. Hill, of the Pennsylvania Manufacturers Association, of this city.

J. H. Wantling Succeeds L. T. Condon

Announcement was made during the week of the permanent appointment of J. H. Wantling to the Philadelphia management of the Continental Paper and Bag Corporation as successor to the late Lewis T. Condon, whose demise took place in the holiday week. The new manager has been temporarily in charge of the Quaker City offices having been associated with the trade here for the past five months while the late manager was on sick leave. He will also take over the sales supervision of the kraft papers of the Southern Division of the International Paper Company, which formerly was a field covered by the late manager and added to his duties just a few months before he was stricken.

Thomas J. Curry With Garrett-Buchanan Co.

After a long association with the D. L. Ward Company as paper sales promotor, Thomas J. Curry has joined the staff of the Garrett-Buchanan Company, 18-22 South 6th street to carry on similar work with his new affiliation. He will be in charge of paper sales promotion work among the consumers, working with the



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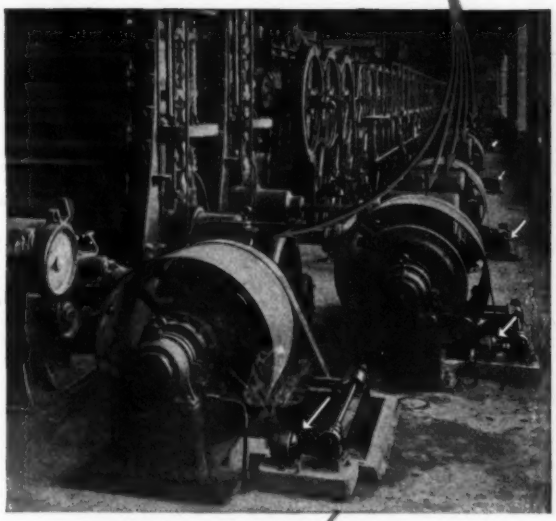

Installation at Chillicothe Paper Company showing Rice-Barton Remote Control Drives.

RICE BARTON & FALES INC.
WORCESTER MASSACHUSETTS

Spiral Bevel

DRIVES

larger printing houses and publishers, and in other sales development campaigns. He was associated with the D. L. Ward Company for more than eighteen years. He assumed his duties with the Garrett-Buchanan Company with the new year.

Graphic Arts Frolic

Having set a date for the annual Graphic Arts Night, the yearly celebration of the allied industries, the Philadelphia Paper Trade Association will unite with the Typothetae in perfecting a program of happy diversions, in vaudeville entertainment, dancing, and a banquet. Although a date has been set and February 14 will be devoted to the annual gathering of paper merchants and their allies in the printing industries, the place has not yet been announced. The 1929 frolic will be in the nature of a Valentine Party and will be conducted in costume as was the similar affair of last year. William T. Inness, of the Typothetae, is in charge of the arrangements.

Christmas Party Ends In Sorrow

Following the passing of the Christmas holidays, the paper trade learned of the sorrow which ended the gaities of the Yuletide celebration held on Saturday December 22 at the headquarters of the Atlantic Paper Company, 919 Walnut street, when Secretary-Treasurer George W. Hassan, of the company, was suddenly stricken in the midst of the afternoon program of entertainment. Mr. Hassan had entered heartily into the spirit of revelry which the members of the firm and the staff were enjoying. He was suddenly attacked with vertigo and complained of a pain in the region of the heart. A taxi cab was quickly ordered by his associates and he was driven to his home where he died later in the evening. He was 59 years of age and had been associated with the firm since its organization more than ten years ago. He was formerly connected with the Megargee-Hare Company in partnership with President Thomas J. Hare, present head of the Atlantic Company, as its Secretary-Treasurer, and upon the dissolution of the former firm became affiliated with Mr. Hare and the late Thomas L. Simmons in the formation of the Atlantic company. He was associated with Mr. Hare for more than 28 years in the fine paper business.

New Officers of Atlantic Paper Co. Elected

With the sudden passing of the late George W. Hassan, secretary-treasurer of the Atlantic Paper Company, election of officers was held in a special meeting called last week to elect his successor. Joseph A. Burtell was elected secretary, while Jesse C. Long, office manager, was elected treasurer. Secretary Burtell was formerly of the sales staff of the company and will continue his duties in this capacity in addition to those of the secretaryship.

Wilder Bros. Take Over Towel Agency

Another Philadelphia representative of the Kraft Duhl-Towels has been appointed by the manufacturers supplementing the former sole distributor in this city through the announcement of the addition of the line to the stock of Wilder Brothers, 12th and Brown streets. The Wilder Brothers and S. Walter, Inc., are the two Philadelphia distributors of these kraft towels made by the Bay West Paper Company, of Green Bay, Wis.

Swedish Pulp Exports Decrease

Shipments of pulp and paper from Sweden during the first ten months of 1928 were uniformly lower than for the corresponding period of 1927. The heaviest decline occurred in exports of dry, unbleached sulphite pulp, which dropped from 532,484 short tons to 440,351 tons or by 17 per cent. Exports of dry, unbleached sulphate were 5 per cent and of wet mechanical pulp 7 per cent less than during the corresponding period of 1927. Paper shipments declined 6 per cent, the heaviest loss occurring in shipments of news print, which declined by 12 per cent. Other classes of paper declined by 4 per cent, while there was a slight increase in the case of boards.

Boston Paper Market Active

BOSTON, Mass., January 6, 1929.—Fine paper dealers here are practically unanimous in statements that the New Year has started with a satisfactory volume of business. The least favorable report is that business is "fairly normal." The fine paper trade generally looks for a good year. At a few houses the prediction was voluntarily made that January would be better than December. Prices are maintained at the same levels.

Reports in regard to kraft vary somewhat. Although the recent cut of $5 a ton in No. 2 kraft was rather disturbing, some dealers say that conditions now are "about normal," although profits are not so satisfactory. Another house says that "competition is getting keener," and still another statement is that kraft is "resting quietly on the bottom." A member of one firm says that most of the customers are taking inventories, intimating that they are not buying any more than is absolutely needed.

Some of the mills have marked up their box board prices, so that the situation in this commodity has improved somewhat, according to at least a portion of the trade. Although chip board had been cut to $30 it is now reported to be selling at a minimum of $35 and even up to $37.50. Prices are expected to go higher, so that predictions that former levels would be restored will possibly be realized. Some low-grade material is said to have sold at $30. Filled news board has been moving at $37.50 and some up to $40. Box board mills are generally busy, running full time, although some of the smaller concerns have shut down for repairs. The feeling of the box board dealers is better, under the apparently improving conditions.

Contrary to predictions of some, old papers have been quiet during the last week. Sales are small and slow. Many of the consumers of paper stock are taking inventories and not buying a great deal. One of the leading manufacturers of box board is said to be out of the market at present for old newspapers, and prices for this material have declined to a minimum of .60. The maximum is .70. Other prices remain unchanged. The market for bagging and rags is also slow, but values are about at the same levels. A few of the mills appear to be well covered, and for some reason have not been buying by the hand-to-mouth method prevalent these days. One mill will not be in the market until April 1.

Good business is reported in both hard fiber cotton twine and jute twine. The hope is expressed that trade customs in regard to contracts for jute twine will be changed like those for cotton twine, so that sellers will not guarantee protection to the buyer in case of a decline of prices.

New Machines in Balachna Mill, Russia

J. M. Voith, of Heidenheim, Germany, writes as follows regarding new machines in the Balachna mill, Russia:—

"We recently had a visit from the managing director of the mill for the purpose of negotiating contracts for additional machinery, and in connection with this Mr. Kayatz made the following statements regarding the equipment, which we supplied for this mill:

"'The starting up of the 234 inch news print machine was effected very satisfactorily and within 1½ hours after the start, the machine made good paper at a speed of 590 feet per minute. The continuous grinders also are working most satisfactorily and are furnishing pulp of excellent quality.'

"Mr. Kayatz expressed his full satisfaction with the machines and their design as well as with the work of our erecting men and stated that the whole plant is a shining example of Voith quality and performance. The Central Administration of the Russian Paper Industry at Moscow, who in the beginning were quite skeptical about the possibility of keeping a machine of such great width and speed in satisfactory operation, also are highly pleased and stated that on a certain day all the Moscow newspapers are to be printed on Balachna paper with a special feature article pointing to the very satisfactory starting up and operation of the Voith machinery at the Balachna mill."

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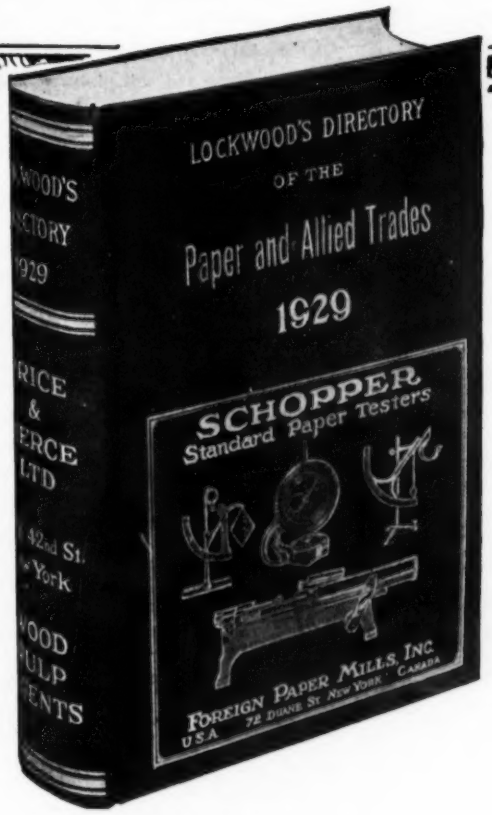

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CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Pittsburgh, Pa.—The F. J. Kress Box Company, 2930 Liberty avenue, manufacturer of corrugated paper boxes and containers, fiber boxes, etc., has completed plans for new plant unit on Penn avenue, to be one-story, 250 x 400 feet, estimated to cost in excess of $350,000, with equipment. Work will be placed under way at once. General contract has been let to the Austin Company, Union Trust Building.

Harriman, Tenn.—The Harriman Company, recently formed as a subsidiary of the Mead Pulp and Paper Company, Chillicothe, Ohio, is said to have plans maturing for its proposed new paper board mill at Harriman, where plant of the Union Tanning Company and other property recently was secured. Negotiations are being closed with city officials for necessary water supply, and test well is being drilled by the W. H. Price Company, North Central avenue, Harriman. Project will consist of several units, and is reported to cost more than $850,000, with machinery. J. Philip Davis is superintendent of construction, in charge.

Los Angeles, Cal.—The Universal Paper Goods Company, 1223 Wall street, is completing plans and will take bids at once for new plant on Soto street, near Hollenbeck street, to be one-story, reported to cost close to $30,000, with equipment. Jack Teal, Los Angeles, is company architect. J. A. Bartel is president.

Chicago, Ill.—The H. Stein Paper Box Company, 2425 West 14th street, has plans nearing completion for new plant unit on Arthington avenue near Tripp street, to be one-story, 75 x 175 feet, estimated to cost close to $50,000, with equipment. It is purposed to begin work at an early date. Cobb & Eisenberg, 5 North La Salle street, are architects.

Oaks (Philadelphia), Pa.—The Synthane Corporation, organized recently by R. R. Titus, formerly vice-president and general manager of the Diamond State Fibre Company, Bridgeport, Pa., and associates, has work under way on a new local plant for the manufacture of fiber products, and expects to have initial building ready for service early in the spring. Extensive output is planned. Project is reported to cost close to $50,000, with equipment. Mr. Titus will be president of the new organization; J. B. Rittenhouse, vice-president; and George J. Lincoln, secretary and treasurer.

Emeryville, Cal.—The Paraffine Companies, Inc., 475 Brannan street, San Francisco, manufacturer of roofing papers and kindred products, is planning an expansion and improvement program at its main mill at Emeryville in 1929, to include the construction of new units and installation of machinery for large increase in production, reported to cost in excess of $600,000. A portion of the fund, it is understood, will also be used at branch mills on the Pacific Coast. R. S. Shainwald is president.

Bellingham, Wash.—The San Juan Pulp Manufacturing Company, Chestnut street and Cornwall avenue, is planning improvements in its mill, including extensions to acid towers and other miscellaneous work. Estimated cost has not been announced.

Valparaiso, Ind.—The Fibroc Insulation Company, care of Lockhart & Fett, Associates Building, South Bend, Ind., architects, manufacturer of fiber insulating specialties, is said to be arranging immediate call for bids for proposed new mill at Valparaiso, consisting of one-story plant unit and power house, to cost approximately $80,000, with equipment. List of equipment to be installed has been arranged. L. T. Fredericks is president.

Chattanooga, Tenn.—The O. B. Andrews Company, manufacturer of paper boxes, folding cartons, and kindred products, has arranged for lease of new two-story building to be erected by the Eleventh Street Realty Company, on Eleventh street, near King street, for which general contract has just been let to Martin & Warlick, King street. Structure is expected to be ready for service early in the spring. The Andrews plant will be equipped for a capacity of close to 700,000 folding cartons and other paper units per day, and with building, is estimated to cost close to $260,000.

Medford, Mass.—The Robert Gair Company, 420 Lexington avenue, New York, manufacturer of corrugated paper board and fiber containers, etc., has taken over the plant and business of the Warner & Childs Company, Inc., Medford, effective, January 1, and will consolidate with its properties. The Medford plant will be continued in service as one of the New England factory units, which include a main mill at New London, Conn., and branch at Haverhill. It is understood that improvements and extensions will be made at the Medford plant. R. M. Taylor, formerly president of the Warner & Childs company, will continue in charge of the plant under the new ownership.

Menasha, Wis.—The John Strange Paper Company, Washington street, is completing the construction of a new boiler plant at its mill, and proposes to place the unit in service at an early date. Building work has been in charge of C. R. Meyer & Sons, 50 State street, Oshkosh, Wis., general contractors. Orbison & Orbison, 110 West College avenue, Appleton, Wis., are engineers.

Philadelphia, Pa.—The American Container Company, Shunk street, near Swanson avenue, has completed plans for the erection of a new plant unit to cost close to $200,000, with equipment, and will proceed with foundations at once. General contract has been let to Raymond Goldstein, Water and Wolf streets. Herman H. Kline, 709 Chestnut street, is architect.

Kalamazoo, Mich.—The Kalamazoo Vegetable Parchment Company is running on regular capacity schedule with full working force, and is said to have more orders on hand than at this time a year ago. Present production will be continued for an indefinite period.

Regina, Sask.—The Dominion Envelope-and Carton Company, Ltd., is said to be perfecting plans for a proposed new local plant for the manufacture of paper boxes and cartons of various kinds, reported to cost close to $200,000, with equipment.

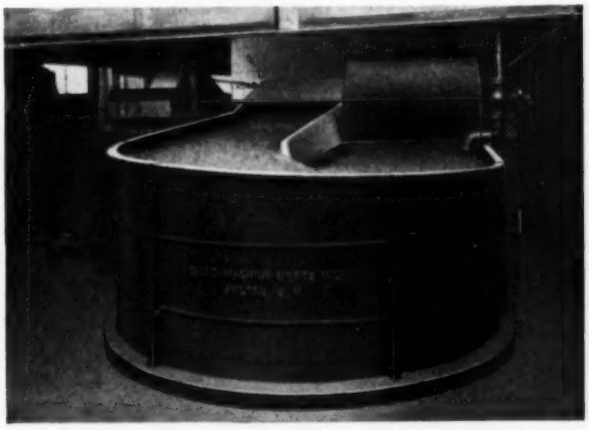
Cap De La Madeleine, Que.—The Bates Valve Bag Company, Ltd., manufacturer of special paper bag stocks, has begun superstructure for proposed new plant at Cap de la Madeleine, to be one-story, 100 x 200 feet, reported to cost approximately $85,000, with equipment, instead of a smaller amount, previously noted in these columns. Headquarters of the company are at Chicago, Ill.

Port Mellon, B. C.—The Vancouver Kraft Company, Van-

Your Paper Is Made In Your Beaters.

ask Mr. Foster

At the mill of the Foster Boxboard Company in Utica, N. Y., there are both Hollander and Dilts New Type Beating Engines. The Dilts New Type carries so much more stock, circulates so much more evenly and rapidly, handles stock of so much heavier density, is so economical of power and performs its work so much easier and better than the other Beaters that we suggest you "Ask Mr. Foster."



View of Dilts New Type Beater in Foster Mill

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MACHINE WORKS, Inc. FULTON, N.Y.
EXPORT OFFICE - 15 PARK ROW - NEW YORK CITY

Your Paper Is Made In Your Beaters.

couver, B. C., is said to be laying foundations for initial buildings for its proposed new mill at Port Melon, about 20 miles from Vancouver, and will proceed with superstructure at an early date. The mill will be used for kraft paper production, and is estimated to cost approximately $1,800,000, with machinery.

Niskakoski, Finland—The Government of Finland has awarded a concession to a company at Helsingforsfi for the construction of a new hydro-electric generating plant near the mouth of the Kutujoki River, vicinity of Niskakoski, and work will be started at an early date. The project will include the construction of a mill for the manufacture of paper pulp, to be equipped for an initial output of about 40,000 tons per annum. Information and name of company at the office of the Bureau of Foreign and Domestic Commerce, Washington, D. C., reference Finland No. 78173.

New Companies, Etc.

New York, N. Y.—The Enterprise Paper Box Company, Inc., has been incorporated with a capital of $20,000, to manufacture and deal in paper boxes, and other paper containers. The incorporators are Arthur Ziman, 1971 Anderson avenue, New York; and Frank Halpern, 2910 West First street, Brooklyn, N. Y.

Pittsburgh, Pa.—The Brubaker Paper Company is being organized by local interests headed by H. F. Brubaker, James G. Fulton and H. S. Jones, to manufacture and deal in paper products of various kinds. Alter, Wright & Barron, 1012 Park Building, attorneys, represent the company. Application for a state charter will be made on Jan. 9..

New York, N. Y.—The Broderick Bag Corporation has been incorporated with capital of 200 shares of stock, no par value, to manufacture and deal in paper bags and other containers. Incorporators are M. T. Broderick, W. N. Sanford and W. R. Foster, 140 Nassau street, New York.

Providence, R. I.—The National Wall Paper Company, Inc., has been incorporated with a capital of 100 shares of stock, no par value, to deal in wall papers and other paper products. The incorporators are Harry J. Weisman, Nathan Spiegle and Jacob Baker, 480 Westminster street, Providence. Last noted is representative.

Worcester, Mass.—The W. T. Potts Company, 22 Austin street, has filed notice of organization to manufacture and deal in paper bags and kindred products. William T. Potts heads the company.

Earnings of the International Paper Co.

The International Paper and Power Company's budget for 1929, on the basis of the recent decline in news print prices, indicates that the consolidated earnings of the company, including New England Power Association, will show a balance after full dividends on the preferred stocks and after dividends at the present rate of $2.40 a share on the Class A common stock, but before depreciation, of some three or four millions of dollars. If depreciation charges are maintained at the present rate of approximately $9,500,000 a year for the consolidated properties, this balance will be turned into a deficit of about six millions of dollars.

Of this $9,500,000 depreciation charge, over $7,000,000 is on the International Paper Company properties—as distinguished from the New England Power Association properties. Of this $7,000,000 very little is required for current replacements, and substantially all is accordingly available as an addition to the net current assets or for construction or other capital purposes.

No decision has been reached whether in view of the drastic decline in the price of news print this depreciation charge should be maintained undiminished.

The company has, however, initiated dividends on the Class A common stock at the rate of $2.40 per annum. The Company has stated that if the estimated progressive increase in the earnings of the company materializes, it is expected that this dividend will be maintained, but that this statement should not be taken as a guaranty, however, that such dividend will be maintained without interruption, since earnings estimates are of necessity subject to fluctuation as business conditions vary.

Box Board Production for November

WASHINGTON, D. C., January 7, 1929.—November production of box board, based on reports to the Department of Commerce by 93 firms operating 120 plants (reports for earlier months including four concerns now out of business) was 83.6 per cent of capacity, as compared with 81.5 per cent in October and 77.4 per cent in November, 1927. In the following table the capacity data vary according to the normal number of working days in each month.

Year and Month	Operation: Inch hours Capacity	Operation: Inch hours Operated	Operation: Per cent of Capacity	Production: Short Tons Capacity	Production: Short Tons Output	Production: Per cent of Capacity	New Orders (Short Tons)	Unfilled Orders (end of month) (Short Tons)
1927—								
Sept.	10,474,300	8,673,208	82.8	275,100	225,617	82.0	235,936	116,383
Oct.	*10,893,272	8,803,337	*80.8	*286,104	224,195	*78.4	220,215	102,810
Nov.	10,474,300	8,308,358	79.3	275,100	213,056	77.4	184,551	76,032
Total 11 mo.	117,731,132	89,199,913	75.8	3,092,124	2,289,096	74.0	2,295,832	.....
1928—								
Jan.	10,372,900	7,833,458	75.5	273,125	203,882	74.6	204,128	80,417
Feb.	10,372,900	8,136,737	78.4	273,125	211,862	77.6	215,333	85,862
March	11,312,244	8,843,542	78.2	297,108	227,344	76.5	244,871	93,380
April	10,474,300	8,311,710	79.4	275,100	221,079	80.4	211,304	84,513
May	10,893,272	8,733,965	80.2	286,104	242,394	84.7	224,366	73,157
June	10,893,272	8,199,515	75.3	286,104	228,646	79.9	228,252	77,782
July	10,474,300	7,992,170	76.3	275,100	201,153	73.1	209,976	79,492
August	11,312,244	9,236,068	81.6	297,108	230,750	77.7	236,682	81,816
Sept.	10,055,328	8,344,464	83.0	264,096	224,971	85.2	234,449	87,097
Oct.	11,384,820	*9,321,253	*81.9	299,052	*243,664	*81.5	*238,720	*81,298
Nov.	10,541,500	8,430,268	80.0	287,976	240,840	83.6	243,591	89,741
Total 11 mo.	118,088,080	93,383,150	79.1	3,113,998	2,476,585	79.5	2,491,672	.....

Year and Month	Shipments of boxboard (Short Tons)	Stocks of boxboard, end of month (Short Tons)	Consumption of waste paper: Capacity (Short Tons)	Consumption of waste paper: Consumed (Short Tons)	Per cent of Capacity	Stocks of waste paper, end of month: At plants (Short Tons)	Stocks of waste paper, end of month: In transit and unshipped purchases (Short Tons)
1927—							
September	228,213	42,923	256,450	216,652	84.5	126,548	51,441
October	226,647	41,630	*266,708	219,627	*82.3	126,040	57,936
November	212,830	41,105	256,450	203,962	79.5	128,639	50,276
Total 11 mos.	2,297,693	.....	2,882,498	2,196,026	76.2	.....	.....
1928—							
January	196,984	49,032	255,225	189,744	74.3	153,747	62,181
February	209,477	50,350	255,225	193,966	76.0	140,104	60,038
March	237,621	40,439	276,966	209,649	75.7	139,255	47,322
April	220,315	40,319	256,450	211,898	82.6	132,621	47,551
May	235,794	49,107	266,708	220,750	82.8	127,217	46,375
June	223,901	53,560	266,708	204,468	76.7	130,484	43,480
July	203,741	49,969	256,450	190,810	74.4	132,265	62,056
August	233,104	47,709	276,966	213,626	77.1	117,009	48,108
September	228,880	45,271	246,192	237,361	88.3	116,197	53,344
October	*244,862	*43,167	289,440	*239,276	*82.3	*127,314	72,960
November	237,341	47,664	268,000	218,278	81.4	126,780	48,707
Total 11 mos.	2,472,020	.....	2,914,330	2,329,826	79.9	.....	.....

* Revised.

Crane and Hoist Concerns Combine

To provide a single source of supply for all sizes of traveling cranes and electric hoists, the Shepard Electric Crane & Hoist Company including its Sprague Division, and the Niles Crane Corporation have combined under the above corporate title.

Through combining the facilities, experience and engineering skill of these two old and successful organizations, the new Corporation is in a position to provide a line of standard and special traveling cranes and electric hoists more comprehensive in its range of sizes and types than any heretofore available.

The Shepard Plant at Montour Falls, N. Y., and the Niles Plant at Philadelphia, Pa., will be continued in operation for the production of the types of equipment for which their facilities have been designed. The main office will be at Montour Falls, N. Y.

The officers of the Shepard-Niles Crane & Hoist Corporation will be Colonel Edward A. Deeds, chairman of the board; S. G. H. Turner, chairman of the executive committee; Frank A. Hatch, president; Sydney Buckley, 1st vice-president; James A. Shepard, vice-president and Robert T. Turner, vice-president.

To the board of directors also will be added from the Niles Bement Pond Company, Colonel Leonard S. Horner, president and Charles K. Seymour, vice-president of that company.

The three divisions of the new Corporation will operate as the Shepard Division, the Niles Division and the Sprague Division.

Three distinctive features of the Norton Pulp Stone contribute to its low cost per ton of pulp:

1. Extremely long life.
2. Exceptionally long periods between burrings.
3. Increased production per unit of time.

And this low stone cost may be uniformly maintained for any Norton Pulp Stone can be exactly duplicated at any time.

NORTON COMPANY
Worcester, Mass.
Canadian Trade now supplied from Canadian Plant.

Grinding Wheels
Grinding Machines

NORTON
PULP STONES

Refractories - Floor and Stair Tiles

Obituary

Mrs. Lillian H. Howard

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, January 7, 1929.—Mrs. Lillian H. Howard, wife of Colonel H. Maxwell Howard, president of the Aetna Paper Company in this city and of the Maxwell Paper Company, Franklin and the Howard Paper Company, Urbana, Ohio, died last Thursday at 3 p.m., at the Savoy Plaza Hotel, New York, following an illness of five weeks.

Mrs. Howard became ill soon after leaving Dayton for New York with her husband. Her son and daughter-in-law, Mr. and Mrs. Howell Howard, were summoned to New York on account of their mother's condition five weeks ago and remained with her during her illness.

During the past 25 years Mrs. Howard had made her residence in this city in the palatial home on West Second street. Owing to the fact that Mr. Howard was in the East frequently on business, the Howards maintained an apartment in New York.

Before coming to this city, Mrs. Howard resided in Cincinnati. She was the daughter of Mrs. Matilda Hoffman and the body was sent to her home, from which funeral services were conducted Monday, January 6. Burial was made in that city.

Besides her husband, she is survived by her son, Howell, and her daughter, Eunice, who is the Countess Perdicaris, and an accomplished musician; her mother, Mrs. Hoffman; and two brothers, Herbert H. Hoffman of Cincinnati, and C. E. Hoffman of Los Angeles, Cal.

Mrs. Howard was a member of the Sacred Heart Church of this city and was identified with the Altar Society of that congregation.

The various mills of Mr. Howard's at Franklin, Dayton, and Urbana, were closed Monday, the day of the funeral.

N. Gleason Torrey

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., January 7, 1929.—N. Gleason Torrey, well known in the paper trade through his long connection with the Hollingsworth & Whitney Company, Boston, died recently at Phillips, Mass. General Hospital. He was taken ill at the Hotel Touraine, Boston, on November 11, and had been under treatment at the hospital since that time.

Mr. Torrey was born in South Braintree, Mass., December 3, 1855, a son of the late Dr. Noah Torrey and Lucinda Thayer Torrey. He retired from active business twelve years ago and had been accustomed to pass the summer season at South Braintree and Allerton Hill, Hull, and the winter at the Hotel Touraine and Los Angeles.

He is survived by his wife, Cora Baker Torrey, whom he married October 21, 1877. The couple observed their fiftieth anniversary in 1927. A son, Lester Thurlow Torrey, of Los Angeles, and a sister, Mrs. S. Ella Arnold, of South Braintree, are living.

Mr. Torrey was a Mason, member of Rural Lodge of Quincy, and a trustee of the Braintree Savings Bank.

William D. Slater

[FROM OUR REGULAR CORRESPONDENT]

SPRINGFIELD, Mass., January 8, 1929.—Word has been received here of the death of William D. Slater, 89, one of the pioneers of the envelope industry in Springfield and inventor of many devices used in the manufacture of envelopes. With Elisha Morgan he founded the Morgan Envelope Company in 1864 which later was merged with several other companies to form the United States Envelope Company. He retired in 1920.

Among his inventions was the "outlook" envelope machine which pasted a transparent piece of paper in front of an open slot cut in the envelopes showing the address within. By proper folding the address appears at the slot and the need of separately addressing the envelope is done away with.

He leaves a son, Dr. Arthur F. Slater, of New Haven, and a daughter, Mrs. Herbert L. Wheeler, of New York City.

Harding-Jones Sue to Retain Water Rights

DAYTON, Ohio, January 7, 1929.—The Harding-Jones Paper Company of Excello instituted suit the past week in the United States District court at Columbus to prevent the draining of the Miami & Erie canal from Middletown to Cincinnati.

It is understood other paper interests are involved in the action and that the move is the first to be made to retain the water rights of paper mill owners in the state waterway.

Legislation was enacted some time ago abandoning the time-honored waterway, the same being effective the first of this year.

Some time ago the Miami & Erie Super-Highway Association initiated a movement to convert the waterway from Toledo to Cincinnati into a motor highway. While this improvement is a gigantic one and will require years for its accomplishment, if it is ever successful, an active group from Middletown, Hamilton, Dayton and other Miami Valley has been pushing the preliminaries and at a meeting last week in this city adopted a resolution calling on the Ohio General Assembly to prohibit the leasing of portions of the waterway to private interests. It is probable that with the opening of the 88th General Assembly this week, steps will be taken to place the canal in the hands of the highway branch of the state government, taking it from the Board of Public Works.

However, the suit filed by the Harding-Jones Paper Company, in the opinion of many, means the effectual blocking of the superhighway project.

Similar action was taken by manufacturing concerns in the Toledo district, and with the northern and southern termini of the waterway remaining intact as a canal, with water rights and privileges, it seems a far cry to the proposed change as outlined by the Miami & Erie Super Highway Association.

Miami Valley firms in Middletown, Amanda, Lockland (Cincinnati) propose to fight the matter in the courts and a long and determined battle is predicted.

In Dayton, there is no opposition to the abandonment of the canal.

Envelope Manufacture

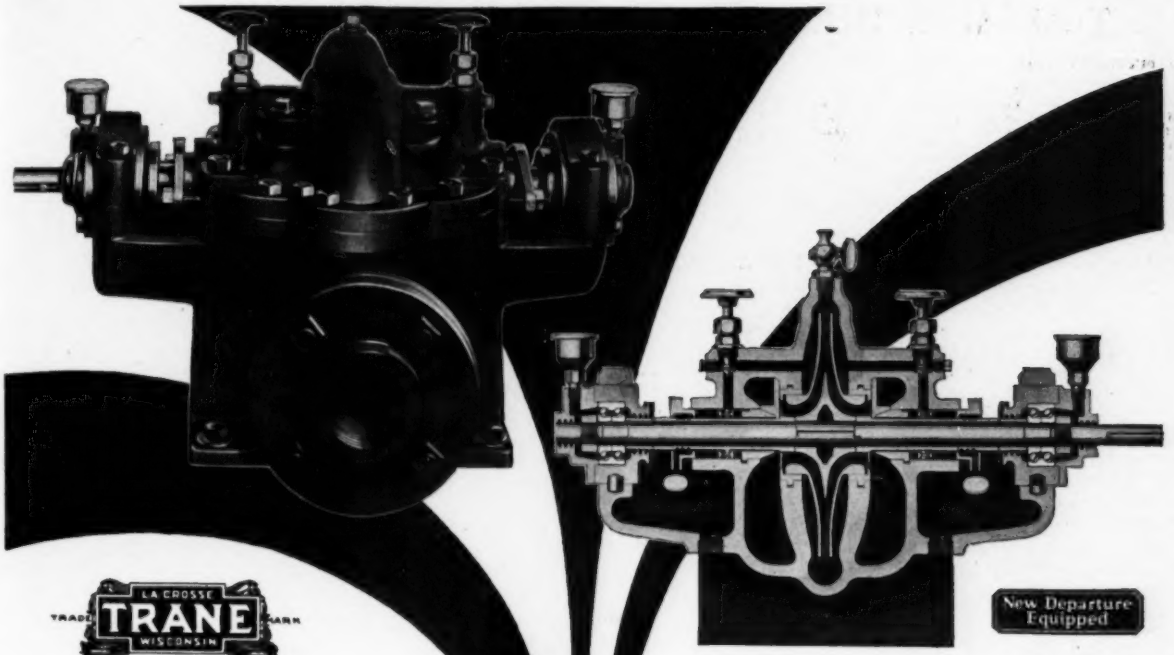
Briefumschlag-Fabrikation. (Envelope manufacture.) Th. Gerdon. Berlin, Verlag der Papier-Zeitung. Carl Hofmann G.m.b.H., 1928. 105 pages. Price, bound, 8 RM.

This little book is written by a man of practical experience and is intended mainly for the envelope manufacturer. It covers the whole range of envelope making by hand and by machine and the text is supplemented by 101 illustrations. It is obviously written for the German industry, as all the equipment illustrated is definitely of German origin. However, the principles of envelope manufacture are undoubtedly the same in all countries and so the American paper maker who reads German will undoubtedly find much of value in the discussion here given. The text covers the history of envelope manufacture, adhesives, the machines and the paper. A reprint of the German standardized sizes, the so-called Din normals, is included and the book closes with some sound advice to young men entering the industry.—C. J. WEST.

Farewell for J. J. Pohlman

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., January 1, 1929.—Associates of J. J. Pohlman, color technician for the American Writing Paper Company, Inc., gave him a farewell dinner at the Hotel Nonotuck last Thursday night and presented him with a gold watch and chain. Many of those present were officials of the company, including L. F. Reynolds, comptroller, R. S. Madden, general sales manager, and Leon M. Yoerg, vice president, who made the presentation. Mr. Pohlman is to take a position with the Beveridge Paper Company of Indianapolis, Ind.



Why

Ball Bearing Pumps are Better

THE two chief requirements of any pump are efficiency and long life.

Trane pump engineers have made sure of both features by designing New Departure Ball Bearings into the centrifugal pump shown above.

Any type of bearing can give proper adjustment initially—but it takes a high-grade ball bearing like New Departure to keep this condition *permanently*. Since wear is not appreciable in New Departures, the shaft cannot sag and allow the impellor to strike the casing, even after many years of service.

New Departures resist thrust as well as radial loads and hence permit very close fits for efficient pump operation.

Now that the true values of ball bearings are becoming universally recognized, every buyer of machinery will think twice before purchasing equipment in which ball bearing advantages are not incorporated.

On the other hand, the presence of New Departures is a good indication that the manufacturer has considered satisfactory service a more important matter than selling price.

The New Departure Manufacturing Company, Main Office and Works, Bristol, Connecticut . . . . . Detroit, Chicago and San Francisco.

NEW DEPARTURE
BALL BEARINGS

107

Trade Mark Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

SDVORECORD—No. 269,286. Arthur Goodman Company, New York City. For bridge score pads, memorandum books, notebooks, and paper pads.

PARALEEN—No. 269,547. Newark, Paraffine and Parchment Paper Company, Newark, N. J. For wax paper.

KRAFTSPUN—No. 274,438. Crown Williamette Paper Company, San Francisco, Cal. For paper Towels.

CHESTERFIELD—No. 275,592. Wortendyke Manufacturing Company, Richmond, Va. For toilet paper, paper napkins, and paper towels.

VELOUR—No. 273,800. Chope-Stevens Paper Company, Detroit, Mich. For printing paper.

VELOURFOLD—No. 273,801. Chope-Stevens Paper Company, Detroit, Mich. For printing paper.

BLACK DIAMOND—No. 274,287. Rochester Ribbon and Carbon Company, Inc., Rochester, N. Y. For carbon paper.

EXECUTIVE—No. 274,772. Executive Ribbon and Carbon Company, Inc., New York City. For carbon paper and typewriter ribbons.

FORTIFIED—No. 274,247. Whiting-Plover Paper Company, Stevens Point, Wis. For printing and writing paper, including bond paper, ledger paper, and safety paper.

WILCO—No. 273,951. Wm. G. Willmann Paper Company, Inc., New York City. For printing and writing paper.

Darmstadt, Scott & Courtney Move

Darmstadt, Scott & Courtney, Inc., dealers in and packers of all grades of papermakers' materials and other waste material, foreign and domestic, have moved their offices from 178 South street, New York, where they have been located for a great many years, to 150 Nassau street, New York, where Rooms 1602 to 1609 are occupied. The telephone numbers of the company will remain the same, Beekman 1270, 1271 and 1272.

Darmstadt, Scott & Courtney, Inc., are one of the oldest established concerns in the paper mill supplies trade in New York, and, incidentally, Louis F. Darmstadt, head of the firm, is just celebrating his fiftieth anniversary in the paper stock business. The firm itself is much older than this, having been founded in 1855 by the late Louis Darmstadt; thus the business has been in existence 74 years.

In recent years Mr. Darmstadt has turned the reins over to younger men, and the conducting of the business has been for some time under the active direction of Louis Marcovitz and Walter T. Clark, both of whom have a long and thorough experience.

Mr. Marcovitz has been in the trade for 21 years, gaining his start in a paper mill and later being connected with a few of the foremost firms in the trade and affiliating himself with Darmstadt, Scott & Courtney, Inc., in 1921.

Mr. Clark has been identified with the trade for the past 25 years, having joined Darmstadt Scott & Courtney, Inc., four years ago. Both these men need no introduction as they are well known in the trade, and they have continued to build up the business of the firm from the point where Mr. Darmstadt left off to no longer take an active part in actual trading. Mr. Darmstadt is, however, still at his desk nearly every day.

Indianapolis Enters Year Optimistic

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., January 7, 1929.—As the local paper industry goes into the new year, there is every justification for optimism. The past year, while not breaking any records, at least was fair and was better than 1927.

The Christmas trade was good and most of the jobbers reported a larger volume than a year ago. As a result of Christmas volume, nearly all the jobbers went into the new year with very low stocks. The tendency is to keep them low and no change in this method of distribution is expected for some time. The printers and other users of paper are following the same methods so that any real increase in demand would be reflected in the market almost immediately.

Perhaps the most active part of the Indiana industry is the board mill. Business is reported rushing and the stocks that enter into manufacture are finding an easy sale at prices. Most of these mills in Indiana failed to take any extensive holiday vacation for inventory as is the usual custom.

Demand for news print has been good since the first of the year, but this is believed to be due to newspapers having had a fair business after the holidays with the large store sales and are buying for protective measures.

Little demand is seen now for building papers but jobbers say seasonal influences are responsible.

Boston Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., January 6, 1929.—The mill of the United Paperboard Company, at Benton Falls, Me., is running full time, with plenty of orders. Since being rebuilt the capacity is 45 tons a day compared with the former capacity of 25 tons a day. About sixty are employed at the mill.

The Kennebec Container Corporation, Fairfield, Me., is installing a Beloit Paster in order to manufacture heavyweight panel boards, container boards and all laminated paper boards.

Massey & Wendell, Inc., have become distributors for a new line of decorative papers.

The Globe Paper Company has been appointed distributors for B. P. F. Book and Wheelwright's Corinthian Cover.

L. B. Tewksbury, of the Spaulding and Tewksbury Company has gone on a business trip to New York, New Jersey and Pennsylvania and T. M. Dix, of the same company, on a similar trip to Connecticut. Both expect to be at the office of the concern this week.

P. E. Allen, manager of the mill of the United Paperboard Company, at Benton Falls, Me., called at the Boston office of the company last week.

James Saunders, shipper for the Spaulding & Tewksbury Company, has been away from his duties for a month on account of serious illness.

Cellophane

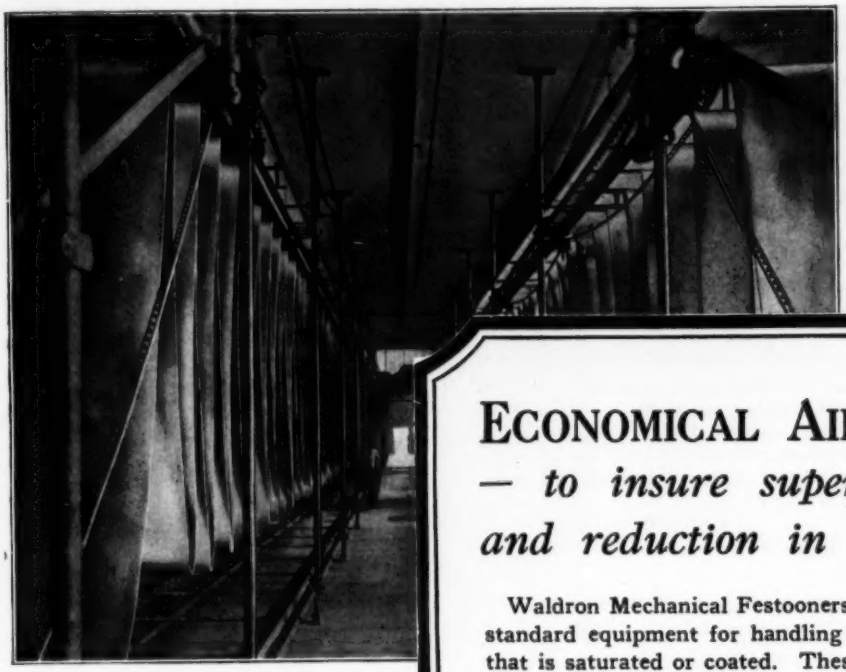
A new booklet of thirty-six papegs, entitled "Cellophane—The Modern Merchandising Aid," has just been issued by the Du Pont Cellophane Company. This is one of the most comprehensive publications ever issued in regard to this product. It gives an outline of its manufacture and discusses the uses made of it in the candy, baked goods, meat products, fish, dried fruit, food stuffs, toilet preparations, soap, drug, textile and tobacco fields. It discusses the various kinds of containers made of Cellophane and gives some idea of the special technical service which the company is able to render. The first inside sheet is of Cellophane itself.

The booklet is beautifully illustrated in colors and gives examples of many well known products which are wrapped in Cellophane.

Standard for Sulphate Wood Turpentine

Secretary of Agriculture W. M. Jardine, under authority conferred upon him by the Naval Stores Act, has promulgated the following United States Standard for sulphate wood turpentine to become effective March 20, 1929:

"Sulphate Wood Turpentine means wood turpentine obtained from wood by the sulphate process."



ECONOMICAL AIR DRYING
— to insure superior finish and reduction in labor costs

Waldron Mechanical Festooners are now practically standard equipment for handling all classes of paper that is saturated or coated. These machines are particularly valuable where color is used in processing. They insure perfect uniformity of tints and shades, preventing changes in color due to temperature conditions.

Fully as great as the improvement in finished product that is assured, is the saving that results from installation of Waldron Festooning Equipment. Labor saving alone has equalled in many cases, the entire cost of the installation within a few months. The saving in floor space is another important item to be considered.

Waldron Festooners are designed for any type of building and for particular handling requirements. Descriptive literature will be sent gladly on request.

John Waldron Corporation

Main Office and Works, New Brunswick, N. J.

NEW YORK
30 East 42nd St.

CHICAGO
208 W. Washington St.

PORTLAND, ORE.
519 American Bank Bldg.

WALDRON

Coating Machines
Rotary Printing Machines
Flat Block Machines
Intaglio Printing Machines
Surface Printing Machines
Winders and Slitters
Festooning Machines
Gumming Machines
Paper Conditioning Machines
Embossing Machines
Paper Rolls (calender and embossing)
Sand Paper Machinery
Saturating Machinery
Color Mixing Equipment and Dissolvers
Creping Machinery
Playing Card Machinery
Specially Designed Machinery for Processing Paper.

WALDRON
Paper Converting Machinery

New York Trade Jottings

Major O. M. Porter, secretary of the American Paper and Pulp Association, was a Washington, D. C., visitor early this week.

* * *

W. E. Grossett and W. E. Orr, well known kraft manufacturers, arrived in New York recently from London aboard the Cunard liner Transylvania.

* * *

James H. Coy, of the Flambeau Paper Company, Chicago, Ill., was a prominent visitor to the Automobile Show in the Grand Central Palace last Monday.

* * *

The New York Division of the Salesmen's Association of the Paper Industry held its regular weekly luncheon and meeting at the Canadian Club last Monday, when plans for the forthcoming annual meeting were discussed. James H. Coy, of Chicago, president of the association, was an unexpected guest, and his presence was highly appreciated by the members. It was announced that the speaker at the next meeting will be H. Bentley MacKenzie, of the United States Chamber of Commerce, who will address the gathering on "South American Export Possibilities."

* * *

Arthur N. Waring, distributor of paper and paper products, of 52 Vanderbilt Avenue, New York, has sent the following communication to the trade, under the date of January 2, 1929: "May I inform you that as of this date I have severed relations with the Groveton Paper Company, Inc., and have resigned as Manager of Sales. A notice will undoubtedly be sent to you by them in reference to their future plans covering sales, and in the meantime all correspondence should be addressed to Groveton Paper Company, Inc., Groveton, N. H. I welcome this opportunity to express to my friends in the paper trade my gratitude and appreciation of their patronage and my hope that the New Year will bring them the best of health, Happiness and Prosperity."

* * *

George C. Davis, well known tariff expert, who, during the last tariff revision, was assigned by the Treasury as one of the consulting authorities to the Senate Finance Committee, has been retained by the National Council of American Importers and Traders, Inc., to represent that organization before the House Ways and Means Committee when the administrative sections of the tariff are taken under consideration in Washington next month. Mr. Davis is to immediately begin the drafting of a brief embodying numerous important suggestions for changes in the administrative law. It is understood that he will give special attention to the valuation clauses and be prepared to vigorously oppose, on behalf of the importer's organization, proposed changes looking to a substitution of United States for foreign valuation in the ascertainment of values for duty purposes.

Carthage Pulp & Board Co. Give Party

CARTHAGE, N. Y., January 7, 1929.—Officials of the Carthage Pulp and Board Company tendered a Christmas party to employees during the past week in the auditorium of the West Carthage high school. William C. Rommel, president, and James Quinn, vice president, were hosts at the affair which was the first of its kind ever given here. During the course of the event music was furnished by Parr's orchestra. President Rommel in a short address issued a welcome to the guests and at the same time commended them for their efficient service during the year. Vice President James Quinn also gave a short talk by way of welcome and in his characteristic style injected considerable humor that was greatly enjoyed.

At the conclusion of a program of entertainment refreshments were served and from a large handsomely decorated Christmas tree gifts were distributed to the several hundred children present.

Paperboard Industries Association to Meet

The next meeting of the Paperboard Industries Association will be held at the Palmer House, Chicago, as per the following schedule:

WEDNESDAY, JANUARY 23, 1929: Meetings in "The Foyer" (4th Floor), Palmer House, 10:00 AM.-12:30 Noon—Meeting of the Folding Box Group. 2:00 PM.-4:30 PM.—Meeting of the Paperboard Group.

THURSDAY, JANUARY 24, 1929: Meetings in "Red Lacquer" Room (4th Floor), Palmer House. 10:00 A.M.-12:30 Noon—Meeting of the Container Group. 12:45 Noon—Luncheon in "Red Lacquer" Room (All Members). 1:45 PM.-4:15 PM.—Meeting of the Three Groups in Joint Session (All Members).

This is the first meeting of the new year and the meetings will be presided over by the officers elected at the annual meeting in Novembr as follows: John J. Brossard, the president of the association, will preside at the general meeting of the three groups in joint session; H. H. Stonebarger, vice-president, at the folding box group meeting; Hugh Strange, vice-president, at the Paperboard group meeting; and H. C. Krannert, vice-president, at the container group meeting.

A full attendance of member companies is being strongly urged. The statement has been made that no improvement in the industry can be expected until the factors in the industry decide upon a constructive program calculated to remedy the present unsatisfactory conditions, and it is confidently hoped that the January meeting may prove to be the turning point toward greatly improved conditions in the paperboard, container and folding box industries.

It is quite likely that by the time of the January meeting, definite advice will have been received regarding the action of the Federal Trade Commission on the proposed Trade Practice Resolutions recommended by the industry, which are now under advisement by the Federal Trade Commission, and further consideration will be given this important subject at the January meetings.

The personnel of the Standing Committees to function for the ensuing year will be announced at the January meeting.

A. P. Peck to be Chicago Representative

[FROM OUR REGULAR CORRESPONDENT]

DETROIT, Mich., January 7, 1929.—Palmer-Bee Company announces the appointment of Ashley P. Peck as Chicago District Sales Representative with offices at 937 Monadnock Block, Chicago, Telephone Harison 9161.

Mr. Peck is a Purdue graduate in Mechanical Engineering, and with his many years of machinery merchandising is well qualified to institute an aggressive sales campaign in the Chicago district.

The Palmer-Bee line consists of Herringbone, Spur, Helical and Worm Gear Speed Reducers, Sub-bases, Flexible Couplings, Conveyors, I-beam Trolley Track Systems, Jib Cranes, Hand Operated Bridge Cranes and Crane Assembly parts.

Palmer-Bee's new line of Herringbone Speed Reducers with anti-friction bearings will be on exhibition in Booth No. 94 of the Chicago Power Show which is being held at the Coliseum, February 12 to 16 where Mr. Peck will be glad to demonstrate the many points of superiority of these new reduction units.

Groveton Changes Sales Arrangement

The Groveton Paper Company of Groveton, N. H., manufacturer of pulp and paper, has deemed it advisable to distribute its product to the trade through its own sales force.

The head office of the Company will be located at Groveton, N. H., with sales offices in New York and Boston. This plan will bring the mill in direct contact with the customers and will be mutually beneficial.

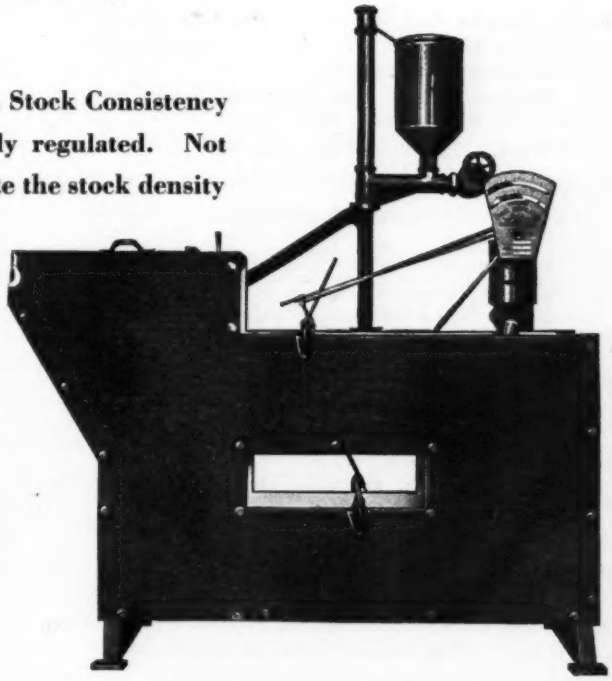
Announcement will be made shortly as to location of offices in cities mentioned. Meanwhile, all orders will be received at mill at Groveton, N. H.

Just a twist of the Wrist adjusts this Regulator— that's All!

The turn or two of a bolt adjusts the DeZurik Stock Consistency Regulator—and stock consistency is instantly regulated. Not only does the DeZurik Stock Regulator indicate the stock density but it instantly regulates the stock. Water is added after the stock passes the first detection.

With the DeZurik Stock Consistency Regulator no stock can go over the machine while the valve is being opened or closed—no stock is out of balance with the weight for any particular run. Operation is instantaneous—without power.

Let us send you complete information about the DeZurik Stock Consistency Regulator. The exclusive patented features of design and construction warrant your careful investigation.



Another exclusive feature of this regulator is its own constant water head control. Varying water pressures in mills make no difference in its operation—the flow of water is held constant. This operation is important and one of the decided advantages of the DeZurik Stock Consistency Regulator.

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: **350 Madison Avenue**

Western Manufacturing and Sales Division: **Smith & Valley Iron Works Co., Portland, Oregon.**

PAPER TRADE JOURNAL
ESTABLISHED 1872

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Vol. LXXXVIII New York, January 10, 1929 No. 2

COMING EVENTS

Fifty-second Anniversary of the American Paper and Pulp Association. Convention and Meeting of Affiliated Associations. Waldorf-Astoria Hotel, February 18-21. Annual Meeting, Thursday, February 21. Annual Banquet, Grand Ball Room, Thursday, February 21.

National Paper Trade Association of the United States. Convention, Waldorf-Astoria Hotel, February 18-20.

Technical Association of the Pulp and Paper Industry. Convention, Waldorf-Astoria Hotel, February 18-21. Annual Banquet, Hotel Commodore, Wednesday, February 20.

Salesmen's Association of the Paper Industry. Annual Meeting, Waldorf-Astoria Hotel, Tuesday, February 19. Luncheon, Tuesday, February 19.

New York Association of Dealers in Paper Mill Supplies. Annual Banquet, Hotel Commodore, Wednesday, February 20.

Canadian Pulp and Paper Association. Convention, Ritz-Carlton Hotel, Montreal, January 23-25. Annual Banquet, Friday, January 25.

THE NEWS PRINT SITUATION

The news print industry has entered upon the New Year without any definite contract price having been fixed for the current year, as has been the custom. A depressing atmosphere of uncertainty therefore envelops the industry regarding future prospects and the depression is deepened by the knowledge that owing to the reckless over-development of the industry Canadian producers are making a present to American publishers at the rate of $30,000,000 per annum of what, if prices were on a reasonable commercial basis, would be legitimate profits.

As time goes on it becomes increasingly evident that recovery from the blow dealt the industry by reckless under-bidding for business in order to obtain work for many new and superfluous paper machines will be a slow and painful one. Despite the fact that the various manufacturers have been brought together by the governments of Quebec and Ontario, despite the fact that they have confessed their business sins to one another, and despite the fact that they have all agreed to work together with a view to rectifying the mistakes that have been made, the fact stands out that the mischief has been done, and that a long unprofitable period, if not actual bankruptcy, faces some, at any rate, of the units in what is Canada's largest export manufacturing industry.

Much, of course, will depend on the average price which news print manufacturers are able to secure. This much can be said, that the general price has not fallen to the price which is said to have been secured by the Hearst interests from the International Paper Company. Manufacturers, it is true, have reduced their prices all round from the 1928 level but hard and fast contracts regarding price are being avoided.

It is said that the news print companies have been informed in no uncertain terms by the Premiers of Ontario and Quebec that if it develops that they are cutting down the pulpwood of Canada and exporting it in manufactured form at unprofitable prices the governments will take drastic action to prevent such an exploitation of the country's forests in the interests of foreign publishers. The Provincial governments have powers in this direction that were not generally realized, for most of the forests are public property, and the news print companies are only allowed to cut pulpwood on leased sections under strict restrictions both as to time and conduct.

Then again, there are increasing signs that the situation may develop ugly political angles in Canada. Cut-throat prices for news print mean ruinous prices for pulpwood, in the cutting of which many people of the farming class engage during the winter months. The farming classes hold the whip hand in the Legislatures of both Quebec and Ontario, and already there are many signs that they resent the hardships which the crisis in the news print industry are bringing.

Another angle is that letters are beginning to appear in the Canadian newspapers attacking the governing authorities for allowing American organizations to come into Canada and exercise such a dominating influence in the news print industry that they can cut prices to the bone and force Canadian companies to sell their product at a loss. It is being claimed that there may be a sinister object at the back of this, namely to ruin Canadian companies so that the whole industry may be gobbled up by foreign corporations. Of course the inference in this point of view is obvious, but what is more obvious is that those who argue this way may easily fan into flames smouldering political antagonisms that would have far-reaching effects. The governments of both the Provinces of Quebec and Ontario have been openly accused time and again of selling out the natural resources of the country to foreign interests. If the news print industry can be quoted as an example of the dangerous policy which has been alleged, it can be realized to what an extent those governments will be prepared to go to show that they, and not foreign interests, still control Canada's forest wealth.

CONSEQUENCES OF DEFORESTATION

The grave consequences of continued deforestation make it imperative that the Federal Government, the States, and the timberland owners join cooperatively in a more positive and aggressive effort to end the evils of forest devastation, according to a statement by Secretary of Agriculture Jardine made in connection with comments on a pamphlet "Deforested America," written by Maj. George P. Ahern, formerly Chief Forester of the Philippines and one of the earliest exponents of modern forestry in the United States—a pamphlet widely circulated by ex-Governor Pinchot of Pennsylvania, who was Chief Forester during the Roosevelt administration.

Pointing out the progress thus far made in the cooperative forestry movement, Secretary Jardine expressed the belief that cooperation between government and industry is applicable to the forest situation on a much larger scale than it has hitherto been applied, but stated that if the cooperative method proves inade-

quate, national security will require that it be supplemented or supplanted by more drastic measures.

Although expressing the view that the forest situation is far from satisfactory and that forest destruction is widespread, Secretary Jardine pointed to the progress made in forestry, especially under the cooperative forest fire control program of the Federal Government, the States, and private land owners. In this program both the States and many private land owners have worked loyally with the Department of Agriculture, said the Secretary, and progress is being made by some of the more progressive lumber companies and land owners in the adoption of other improved forest practices besides fire protection.

"The Department of Agriculture is interested in the forest problem not only as a matter of timber supply, but as a matter of productive use of land," the statement continues. "One-fourth of our total land area is better suited physically and economically for forest production than for any other purpose, and the continued deterioration of this vast resource is adversely affecting agriculture as well as every other line of industry."

The Secretary pointed out the large responsibilities with which his department is charged in the forest enterprise as a whole. It administers the national forests, participates in a large program of forest land purchase, is responsible for much research in forestry and forest utilization, and administers the extensive Clarke-McNary program of cooperation in forest fire control and other phases of forestry with the States and private forest owners.

Dr. Herty to Discuss Future of Cellulose

Dr. Charles Holmes Herty will be one of the two men who have been invited to address the 52nd Annual Business Meeting of the American Paper and Pulp Association on February 21 next. Dr. Herty has had a distinguished career as a chemist, occupying the chair of chemistry in the Universities of Georgia and North Carolina, being Editor of the *Journal of Industrial and Engineering Chemistry* and then having served with great distinction as president of the American Chemical Society and advisor to the Chemical Foundation.

Dr. Herty will speak on "The Future of Cellulose," that structural basis of the vegetable kingdom and the greatest construction material in the world. It is probably not too much of an exaggeration to say that the quality of civilization in different countries depends largely upon the form and extent in which cellulose is available to them. For example, here in the United States there are probably seven and a half billion dollars tied up in the capitalization of the industries based on the utilization of cellulose, with some $3,400,000,000 invested in the lumber industry, at least two billions and a half in the cotton textile industry, and probably more than a billion and a half in the paper industry.

Dr. Herty has made a thorough study of the utilization of cellulose and will present some striking future possibilities, which will be of interest to all pulp and paper men, both technicians concerned in the refinement of processes whereby cellulose is formed into sheets of paper and the executives who are responsible for the adaptation of those processes in commercial undertakings, the value of whose annual product is at least equal to the capitalization of the industry.

Finland's Pulp Exports Increase

Exports of ground wood from Finland during the first eleven months of last year amounted to 44,524 tons of dry pulp, 59,949 tons (dry weight) of moist pulp, or a total of 104,073 tons as against 77,537 tons during the corresponding period of 1927. There was reported for the same period an exportation of 37,923 tons of paper board as against 34,191 tons during the first eleven months of 1927.

Discusses Situation with Employees

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., January 7, 1929.—The Abitibi Power and Paper Company has adopted the policy of discussing the news print situation frankly with its employees, and the following Christmas message to them, signed by J. E. Patterson, manager of operation, is an example:

"Once again the festive season is with us and I would like at this time to wish each and every one of our employees and their families a Bright and Happy Christmas and the best of Good Luck during the year 1929.

"The year 1928, now almost closed, has been perhaps one of the most difficult ever experienced in the news print industry, with its over-production and falling prices.

"In my message to the mill employees just twelve months ago, I pointed out what the situation was and what each and every one of us would have to do to meet it. I am very proud to be able to say that everyone apparently realized the situation and gave wholeheartedly of his loyalty and co-operation,—the loyalty and co-operation which spells the difference between success and failure.

"Loyalty and co-operation is a feature of the Abitibi organization, right down to the last man, of which we have all been justifiably proud; and it is well to remember that this is the one thing which will keep us at all times in the front rank among the various mills.

"It is somewhat difficult to say just yet, what the conditions during the coming year will be, but whatever they are, it is going to mean a year of hard work. We will have to maintain the quality of our product, we will have to cut our operating costs to an absolute minimum and of necessity eliminate all wastes of whatever kind.

"I, personally, am looking to the coming year with confidence, realizing what our men have done in the past, what they are capable of, and knowing that they will bend every effort during the coming year to keep the name of 'Abitibi' in the forefront.

"In conclusion, I would like again to assure you all of my very best wishes for a happy Christmas and all prosperity during 1929."

Big Maclaren Project Goes Ahead

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, QUE., January 7, 1929.—The James Maclaren Company, of Buckingham, Que., is going right ahead with its project to establish a 250-ton paper mill on the Lievre river in Quebec, north-east of the city of Ottawa. The intention is to have the power plant and paper mill in operation in 1930. The W. I. Bishop Company, of Montreal, which has the construction contract is now sending in supplies.

A storage reservoir with a capacity of 25,000,000 cubic feet is to be built. The proposal is to instal three initial units of 30,000 h.p., to be followed later by a fourth.

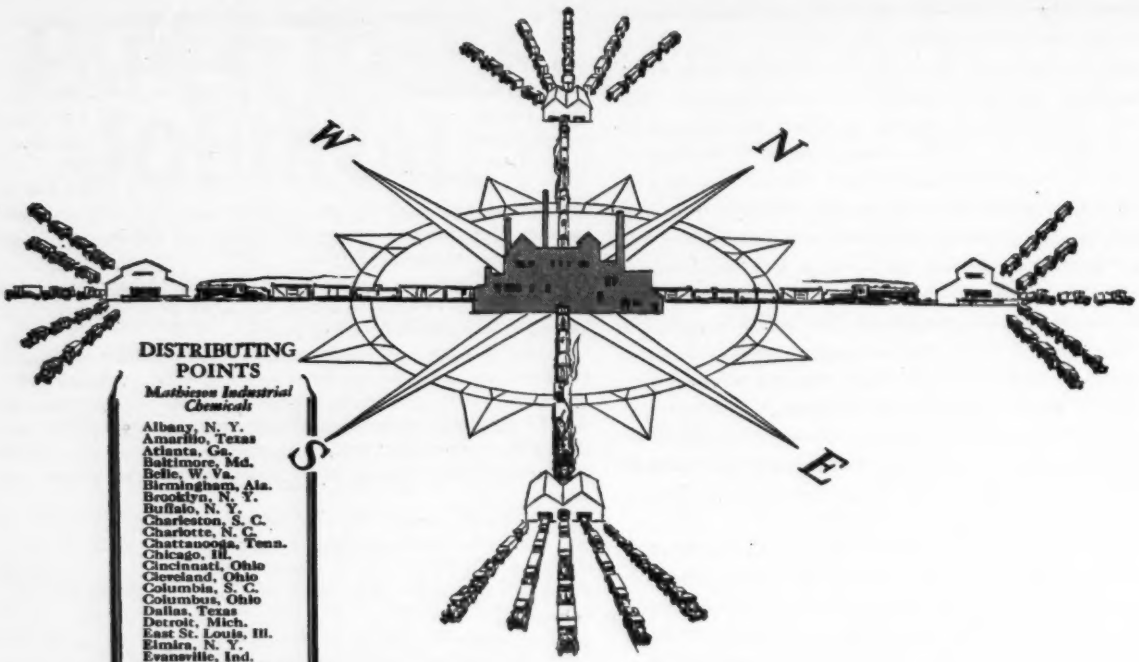
The construction of the power house will cost approximately $5,000,000, the storage dam at Cedar Rapids $1,500,000, and the paper mill $6,000,000. The paper mill will be equipped with two 234-inch machines, each having a daily capacity of 125 tons of news print.

Congressional Record on Corn Stalk Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., January 9, 1929.—Representative LaGuardia, of New York City has introduced a bill in the House "providing for the printing of the *Congressional Record* on corn stalk paper." The bill, which has been referred to the House Committee on Printing, is as follows:

"That at the expiration of the current contracts for paper, the Congressional Record shall be printed on cornstalk paper, such cornstalk paper to be purchased in the open market in accordance with the provisions of title 44, chapter 1, of the United States Code of Laws."



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AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Modern Methods and Machinery in the Sulphite Industry*

By C. A. Skioldebrand[1]

This paper will endeavor to outline the modern methods and equipment as seen in both American, Canadian and Scandinavian sulphite mills. It has been found that many methods and machines of Scandinavian origin may be successfully used in the mills on this side. It is well-known that Scandinavian manufacturers have been concentrating on quality and low cost for many years, and the results of their experiments coupled with American and Canadian efficiency and mass production often give the wished for result of low cost, high quality and production.

Dealing with the Sulphite Process from the wood to pulp and going through each different stage as it occurs in actual operation we shall first consider the Wood Room.

Wood Room

Knife Barking Machines versus Drum Barkers

In order to make the cleanest possible sulphite pulp the wood should be well cleaned. Drum barked wood is in most cases clean enough for newsprint pulp. For high grade sulphite pulp, and where particular cleanliness is required, knife barking machines should be used. There is no question about the high grade of cleanliness when cooking knife barked wood.

There is on the market a new improved type of knife barking machine, the K.M.W. Type B.S. This machine has a capacity of about 4½ cords per hour and consumes about 35 horse power. It wastes only, according to tests, about 6 per cent wood apart from the bark, if the machine is run correctly. The knives are adjustable during operation and set at a certain angle, the disc is of an oval shape and only one man is required for its attendance. Ordinary so-called hand barking machines waste anywhere from 12 to 20 percent of the wood, depending upon the shape of the log and the skill of the operator.

It has been claimed that knife barking machines are not economical as compared with drum barkers. A short comparison will show that the economy effected by obtaining dry bark and wood refuse (resulting in considerable saving of coal) compensates for the somewhat higher power consumption and labor cost. Apart from this the higher cleanliness of the pulp would in itself justify its installation.

The calculations following are based on 100 cords of spruce wood of normal size, say 6 - 7 inches in diameter. The heating value of coal is 14,000 B.t.u. per pound. A comparison is drawn between working conditions in a mill using (A) high efficiency drum barkers where the wet bark and wood refuse is pressed in bark presses and used as fuel and (B), knife barking machines using the bark and wood refuse directly as fuel in the boiler-house.

(A) Drum Barkers

The loss in bark and wood using drum barkers would be about 10 and 2 per cent respectively, or 12 per cent altogether, which means an amount corresponding to 12 cords per 100 cords of wood.

In a good bark press the waste would have a test of about 40 per cent bone-dry and a heating value of 2500 B.T.U. per pound dry weight. Each cord of dry bark and wood refuse would weigh about 2800 lbs., and therefore the waste from 100 cords of wood would correspond to about 3.0 tons of coal.

(B) Modern "K.M.W." Knife Barking Machines

When using the up-to-date Swedish knife barking machine (K.M.W.) wasting about 6 per cent of wood according to tests, apart from the bark which is estimated at 10 per cent, the amount of bark and wood refuse would be 16 cords per 100 cords of wood with a test of 60-70 per cent bone-dry. The heating value of this refuse would be about 5,000 B.t.u. per pound dry weight and would correspond to approximately 8.2 tons of coal.

Most mills have to reclaim part of their drum barked wood with knife barking machines. In most cases at least 20 per cent of the amount barked in the drum barkers has to be re-barked, in some cases it may amount to 50 per cent, due to the fact that the wood gets dark and sometimes black if barked and piled afterwards as is usually done. The machines mostly used for this purpose are of the ordinary disc type of knife barking machine which wastes anywhere from 12 to 20 per cent of wood, depending upon the shape of the wood and the care of the machine operator.

Figured on 20 per cent after-barking, 15 per cent loss in the barking machines and on 100 cords, there will be an additional loss of 3 cords of wood. Figured on 3,000 pounds weight per cord of wood of 30 to 40 per cent dryness and about 5,000 B.t.u. heating value, the wood refuse would be equivalent to 1.6 tons of coal. The total loss of wood would therefore be increased from 2 to 5 per cent, and the combined loss of bark and wood refuse 15 per

* Presented before meeting of Superintendents Association, St. Johnsbury, Vt., October 6, 1928.

[1] Member TAPPI; Engineer, G. D. Jenssen Co., New York, and Paper Machinery, Ltd., Montreal, P. Q.

cent as compared with 16 per cent using the K.M.W.'s new type of knife barking machine.

The fuel value of the bark and wood refuse when using drum barkers would correspond to 3.0 + 1.6 = 4.6 tons of coal, and when using the K.M.W. knife barking machine, 8.2 tons.

POWER

Drum barkers would consume in the neighborhood of 90 to 100 horse power on 100 cords of wood and therefore produce about 1 cord per horsepower.

The K.M.W. knife barking machine would consume from 150 to 180 horsepower on the same production and therefore produce .5 to .6 cords per each horsepower.

COMPARISON BETWEEN DRUM BARKERS AND K. M. W. KNIFE BARKING MACHINES
Calculations based on 100 cords of wood.

	Drum Barker	K. M. W. Knife Barker
Loss of wood (per cent)	2	6
Loss of bark (per cent)	10	10
Heating value of bark and wood refuse (B.t.u.)	84,000,000 (Refuse pressed)	230,000,000
Coal equivalent (tons)	3	8.2
Per cent of drum barked wood after barking	20	..
Loss of wood (per cent)	15	..
Increase of amount of wood refuse (per cent)	3	..
Total amount of wood refuse incl. after-barking (per cent)	5	..
Total amount of wood and bark refuse (per cent)	15	16
Corresponding amount of coal, tons	4.6	8.2
Horse power	90-100	150-180
Capacity per horse power (cords)	About 1	0.5-0.6

The coal value would be nearly twice as high when using the K.M.W. barking machine, and the yearly saving in coal figured on 50 tons daily production of sulphite pulp would be 1,140 tons, corresponding to about $8,000, figured on a coal price of $7 per ton.

The wood loss would be practically the same in each case. The capacity per horsepower would be slightly over half as compared with drum barkers. It can readily be seen that if highest grade of cleanliness of pulp is desired it would be to advantage, and almost necessary, to use the K.M.W. knife barking machine. Of course it would not pay very well to use a knife barking machine with high wood loss.

In the foregoing calculations only the best type of drum barker wasting a minimum in broomed ends has been considered. Some types of drum barkers are much more wasteful.

The pulp produced when using the K.M.W. knife barking machine is much cleaner than the average pulp produced using drum barkers. Almost all Scandinavian mills except a few news print mills are using above mentioned type of barking machine as they *have* to make the highest grade of pulp due to the fact that their pulp in most cases is not converted into paper and has to be sold on foreign markets.

Chipper

Every sulphite man knows that uniform chips are of paramount importance. The Karlstad Works has conducted extensive research on an experimental chipper with movable spout and variable speed of the disc. The angle of the spout and the speed were varied until the best chips were obtained. Of course, by obtaining better chips the amounts of sawdust, oversized chips and slivers are reduced to a minimum. In some cases the loss of sawdust has been only 0.5 per cent. The average chipper wastes probably about 4 per cent and therefore, even figured with a loss of 1 per cent, savings in wood figured on 100 cords would be about 3 cords. Replaceable wearing plates, the rectangular shape of the spout and the easy adjustment of the cast steel disc are some of the newer features of this chipper. The speed of the disc ranges from 150 to 200 r.p.m.

Slab Chippers

The K.M.W. slab chipper produces cooking chips from slabs and edgings from sawmills and box factories. It is provided with a patented feeding arrangement with forced feeding. The spout is provided with wearing plates and the cast steel disc can be set by means of a fine adjustment in the main bearing. Even comparatively short slabs are taken care of, as a so-called "feeding shoe" guides the slabs close to the disc. This chipper makes good cooking chips as has been proven by a few mills in this country.

Acid Plant

JENSSEN ACID SYSTEM

This paper shall only describe the most modern type of the Jenssen acid system, the so-called vertical type, and also some new details which might be of interest. The so-called horizontal type, ordinary type, is probably known to every sulphite man.

The sulphur burners and combustion chambers are located on the cook's floor, the gas cooler on the floor below and the gas fan and distributing valves on the ground floor. The water pump is fed from a mixing box into which if desired the warmed up cooler water may be run. This precludes the need of a pump. It is also a convenient way of regulating the temperature of the water to a certain degree, if desired.

If the plant is conveniently laid out the savings in labor would be equivalent to acid makers' wages or about $5,000 per year. The cook generally supervises the burner-room and his first helper attends to the cooler and the valves below. It is of great assistance to have a recording SO_2 meter and also the starter of the fan motor on the top floor so that everything can conveniently be supervised and regulated.

The following are the working conditions at three different mills using the vertical system:

Mill	Production (tons)	Digesters: Size (tons)	Digesters: Number	Crew: Cook	Crew: Helpers	Crew: Stone Men
1	56	18	2	1	1	2
2	115	14	4	1	3	3
3	100	12	5	1	2	2

In the first two cases the saving is equivalent to acid makers' wages or about $5,000 a year. In mill No. 3 the staff was reduced by seven men after introducing the new system, equivalent to a saving of about $12,000 a year. This was due to the fact that the mill had an old style system before. In another mill not mentioned in above table the savings correspond to the difference between acid makers' and three laborers' wages and amount to a sum of about $2,000 per year. This lower figure is due to local conditions.

One detail which might be of interest is the recently introduced plug cocks for distribution of gas and water, weak and strong acid. These plug cocks facilitate the operation considerably. In each system there are two 4-way gas plug cocks for changing the gas flow and two, in most cases 6-way plug cocks, for changing water, weak and strong acid.

Digester House and Screen Room

CHIP FILLING DEVICES

During the last few years the Scandinavian sulphite mills have been able to increase their production in some cases up to 27 per cent by installing chip filling devices. These devices have also been tried on this continent.

The following is a description of the Svensson chip filling device which has been tried out in a few mills. It is operated by steam and the chips are subjected to a spiral rotary motion, and in that way are more evenly distributed and tightly packed. About 12 per cent increase in yield has been obtained, but at the same time the filling time was lengthened to some extent. If conditions are right it is to advantage to install a chip filling device; the acid has to be strong, the cooking time not too short and the acid preferably as warm as possible. Also, good steam distribution in the bottom of the digester is of advantage.

The longer the cooking time the greater the possibility for tighter packing without causing an extensive amount of tailings and uncooked pulp. Figures taken direct from practical operation indicate that the packing of the chips can be increased in proportion to the cooking time. For instance, at 8 hours cooking time the possible increase would probably be about 8 per cent, at 11 hours cooking time 10 per cent, and at 17 hours, 20 to 27 per cent, provided conditions for obtaining circulation and penetration are good.

The Svensson digester filling device is able to pack the chips more thoroughly than other devices. Under favorable circumstances a substantial increase in production can be expected. To date over twenty are operating successfully in Scandinavia.

Cooking and Preparing the Stock

To get better yield and quality as well as lower sulphur and possibly also a slightly lower steam consumption it is advisable to cook longer and blow at a low pressure. The digesters should be blown down to about 15 to 20 pounds gage pressure and then emptied; either flushed out or blown out. The liquor is in most cases drown off partly through a strainer in the bottom of the digester.

The fibers obtained in such a way are not exposed to a sudden expansion and therefore are better preserved than when blown at a high pressure. Also a better heat and sulphur recovery are made possible. In order to carry out the emptying or blowing of the digester in as short a time as possible hydraulic quick-opening blow valves should be used.

The stock is emptied either into closed or open blow pits. If closed blow pits are used the stock is pumped according to Alternative I in the illustration. If open blow pits are used pulp diggers have to be installed. This machine is a bucket elevator which can be raised and lowered according to the stock level in the pit. The pulp is fed to the elevator by means of two large feeding screws, one left and one righthand. In that way the strength of the fiber is preserved as it is not exposed to the terrific blow from a high pressure water hose or the rather severe treatment in a pump. Also, large expensive stock chest can be eliminated.

Sulphite pulp cooked in this way is not sufficiently separated and therefore has to be treated in so-called separators. In this machine the fiber bundles are separated in a mild way. It is a conical wooden drum with a shaft in the center, provided with a great number of wooden pegs rotating at about 250 r.p.m The stock is fed in at about 10 per cent consistency and worked through the drum.

The K.M.W. knotter screen is a rod cylinder with copper rods mounted parallel to the cylinder shaft. The slot between each rod is only ⅛ inch. It is quite evident that the knots are well

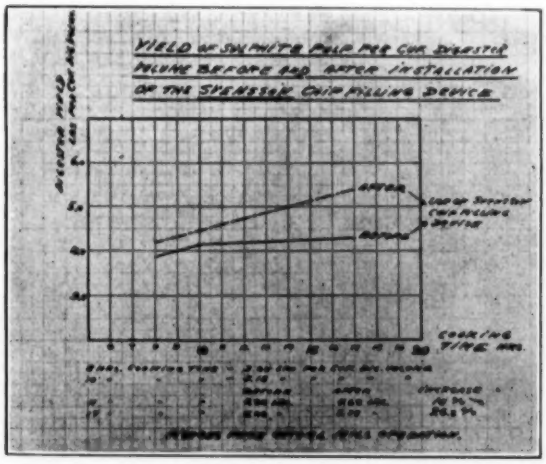
YIELD OF SULPHITE PULP PER CUB. DIGESTER VOLUME BEFORE AND AFTER INSTALLATION OF THE SPENSER CHIP FILLING DEVICE
AFTER
BEFORE
COOKING TIME HRS.

Fig. 2

Chip Filling Devices. Chart showing the degree of sacking at different cooking times.

washed and that a minimum amount of inferior material can go through.

Steam for Cooking

The steam should be conditioned both in regard to pressure and temperature. If the steam is too hot serious trouble can occur in the cooking. If highly super-heated steam has to be made for power purposes the steam for cooking should be regulated in regard to temperature. This can easily be done by installing the steam-temperature regulator, Kalle system. This regulator works quite reliably and efficiently and is used in most mills in Scandinavia both on steam for cooking and for drying paper. The main feature of this regulator is the patented electrically operated valve with thermostatic control. By the aid of these devices water under high pressure is injected into the steam line—preferably near a bend. It has been found very useful, particularly in

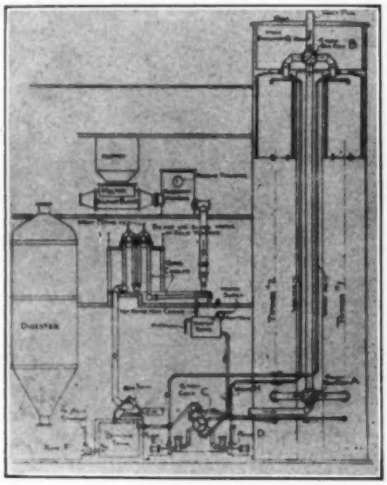

Fig. 1

Jenssen Acid System Vertical Type.

plants generating highly superheated steam for power purposes and where the exhaust is used for cooking and drying.

Heat Recovery in the Cooking

The last few years have seen great steps forward in regard to heat recovery in the cooking. The hot relief liquor and gases are injected without cooling either into the digesters direct (Decker) or in a separate receiver (Stebbins). In the first case the in-

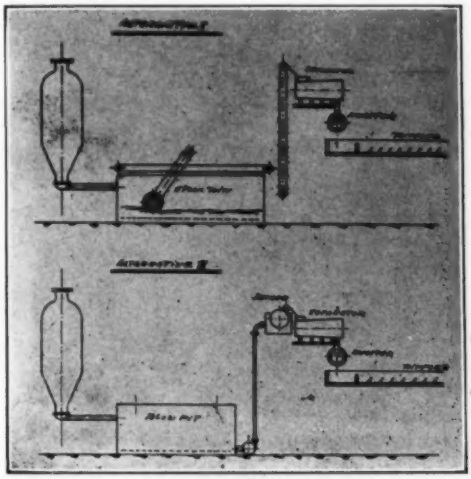

Fig. 3

Layout of digesters and blow pits using: Alternative I. Open blow pits, pulp diggers, separators (pulp breakers). Alternative II. Closed blow pits, decker, separators.

stallation is inexpensive and the heat recovered in most cases corresponds to an amount of at least 1,000 pounds of steam per ton of pulp. In the second case the cost of installation is higher as an additional receiver is necessary. The saving of heat in this case corresponds to an amount of, in most cases, 2,000 pounds per ton of pulp. Of course the amounts of steam saved depend very much upon the heat efficiency in the cooking process before the installation.

Wet Room

Kamyr Wet Machine

There has been a long felt need for improvement and reduction

in the operating cost in this stage of the sulphite process. This has been met recently by the introduction of the Kamyr wet machine. This machine can be used either as a wet machine producing pulp in laps up to 58 per cent air dry direct from the machine, or as a part of a pulp drying machine, when used as a substitute for old wet sections.

FIG. 4
Pulp Digger.

AS WET MACHINE

The machine consists of one suction mold, one patented low pressure press, one patented high pressure press and also, if desired, pre-driers and cutter. The cylinder mold is made of cast iron and provided with ribs forming cells which are put under vacuum. About two-thirds of the circumference is under vacuum. The mold is covered with a perforated copper plate fastened to the cells, on top of which is a bronze wire cloth (about No. 28 mesh).

The suction box provided with brass sealing ring is loosely attached to one end of the cylinder mold. This box is also provided with two flanges for connection to a vacuum pump and a water pump or syphon pipe. A small felt is necessary for picking up the stock from the cylinder mold. Two couch rolls and four felt rolls guide the felt.

FIG. 5
K M W Knotter.

The vacuum pump takes care of the air only. The water is taken care of by a syphon pipe, or if an insufficient water leg is available a small water pump has to be installed. It is important that the vacuum pump be of sufficient size in order to make the sheet dry enough when it leaves the cylinder mold. The dryness of the sheet leaving the mold should be about 20 per cent.

Each of the two presses consist of two grooved rolls, two side frames, press arms and spiral springs for adjusting the pressure. These are also provided with doctors to keep them clean. The rolls are made of special high quality cast iron and ground to a certain crown. The sheet leaving the first press should have a test of about 40 per cent air dry, and leaving the second press about 55 per cent. If a still higher dryness is desired pre-driers can be installed. These consist of either one or two ordinary drying cylinders with a certain heating surface in order to warm up the sheet. The dryness obtained when using pre-driers usually is about 58 per cent and has sometimes reached 60 per cent. For cutting the sheet a cutter has to be installed.

FIG. 6
Steam Temperature Regulator System "Kalle."

AS WET SECTION IN PULP DRYING MACHINE

Either Kamyr presses alone or entire Kamyr wet sections can be installed in old pulp drying machines.

Alternative 2 shows an arrangement with two Kamyr presses with pre-driers. This arrangement would raise the dryness of the sheet up to 50 or 55 per cent, which, of course, means a considerable saving in steam.

If the sheet before using Kamyr equipment when going on the drier tested 40 per cent air dry and after installing same, 54 per cent, the difference in the water contents of each ton of pulp would be 1,296 pounds. If figured on a steam consumption of 1.8 pounds per ton of water to be evaporated there would be a saving of 1.8 × 1,296 = 2,333 pounds of steam per each ton of air-dry pulp.

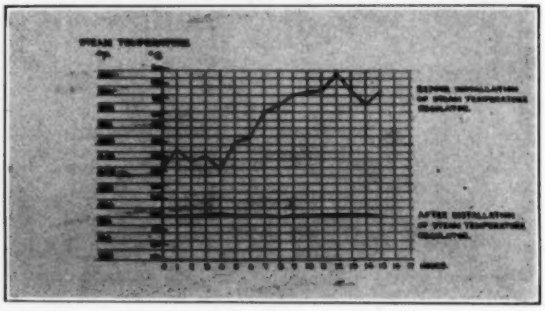

FIG. 7
Steam temperature chart before and after installation of "Kalle" Steam Temperature Regulator.

In order to make a drier and heavier sheet it would be of advantage in this alternative to use a rotary suction box. This would eliminate to a great extent crushing the sheet in the couch rolls, and also, a heavier sheet could be run and therefore an increased production result.

SAVINGS

As stated above, the saving in steam would be about 2,333 pounds per each tons of air-dry pulp. Figured on a coal price of $7 per ton and 8 pounds evaporation per each pound of coal, the actual

saving in coal per ton of air-dry pulp would be as follows:

$$\frac{2333 \times 7}{8 \times 2000} = \$1.02$$

Alternative 3 shows an old drying machine equipped with a whole Kamyr wet section. The main advantage of this alternative would be saving in floor space and possibly increased production, as the suction mold allows a heavier sheet than could be run before. It can be expected that by reducing the amount of water to be evaporated by 43 per cent the driers could be reduced in number by the same amount. However, this is not the case, as our experience has been that only 30 per cent of the driers can be eliminated. On the other hand, if all driers are maintained in operation the production can be increased about 30 per cent if the wet section allows such an increase.

Maintaining the same production the floor space of the drier part can be reduced by 30 per cent. The room occupied by the press is considerably less than the room occupied by the old wet section. It is, however, generally preferred to lower the steam pressure in the cylinders and maintain the original number of driers, so saving in floor space may only be counted on in case of new installations.

Savings in felts in this Alternative would be: felt costs when using old equipment minus the cost for the pickup felt used on the cylinder mold. On 100 ton production the felt cost would amount to about $300 to $400 a year. The wire cost would amount to about the same.

On account of the high pressure to which the pulp is subjected it will occupy 8 to 10 per cent less volume in packed form. It used to be customary to figure 50 cubic feet per ton but this is reduced to 43 to 46 cubic feet when using Kamyr presses.

It has been claimed that Kamyr pressed pulp is hard to handle in the beaters. In order to improve the sheet in this respect the drying part can be equipped with one so-called smoothing press and one softening apparatus. The smoothing press consists of one

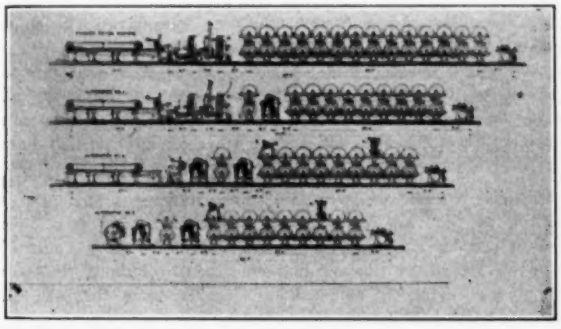

FIG. 8

Kamyr presses with predriers.

roll with levers and weights for regulating the pressure and serves the purpose of smoothing the surface of the corrugated sheet. The softening apparatus consists of two rolls with small ribs lengthwise which break up and soften the sheet.

Up to the present time works in Sweden, Canada and the United States have manufactured and delivered eleven complete Kamyr wet machines for sulphite pulp, twelve for sulphate, kraft and soda pulp, and fifty-seven for ground wood. About one hundred and twenty-five single Kamyr high pressure presses have been manufactured and installed in old pulp drying machines.

THE FIDALGO DRYING SYSTEM

This system was invented a few years ago and it is claimed that it effects great savings in steam and results in improvements in the strength and general paper making qualities of the pulp. The drier consists of a box-shaped drying compartment enclosing the drying apron. The wet pulp is shredded and distributed on the apron which moves slowly through the whole length of the compartment. Warm air is injected at the dry end of the drier and is drawn in a particular manner through the whole compartment by a series of fans. The temperature of the ingoing air is very low, or about 110 degrees F. At the exhaust the air is nearly satu-

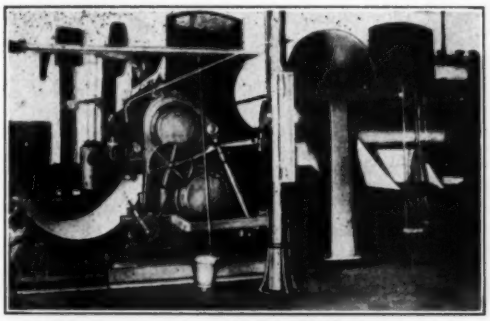

FIG. 9

Standard pulp drying machine equipped with Kamyr presses and entire Kamyr wet section.

rated. The exhaust fan is regulated by means of a thermostatic control.

By exposing the nearly air-dry pulp to this low temperature the fiber is preserved. The strength and general paper making qualities of Fidalgo dried pulp are very close to that of wet pulp. The steam consumption, of course, depends upon the dryness of the sheet entering the drier. If a Kamyr wet section is used the sheet

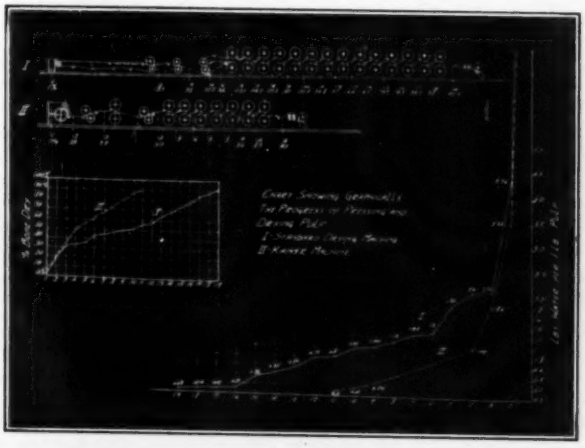

FIG. 10

Chart showing graphically the process of pressing and drying pulp. I. Standard drying machine. II. Kamyr machine.

would test at least 55 per cent air dry and the steam consumption in that case would be about 2,400 pounds per ton.

Most Fidalgo driers installed during the past year have been equipped with Kamyr wet sections.

It will be seen by the details which have been described that substantial savings and improvements can be made by the adoption of modern methods and machinery. There is still a wide field for further improvements and many problems are yet to be solved. No doubt the next few years will see still further advances in efficiency and economy.

Paul W. Bidwell Made Superintendent

HOLYOKE, Mass., January 7, 1929.—Paul W. Bidwell of Lexington avenue has been appointed general superintendent of the White & Wyckoff Company, manufacturing stationers of this city.

Slime Control with Chlorine and Compounds of Chlorine*

The exact composition and nature of "slimes", sometime referred to as "liver" and "pitch", are not known. That some form of slime trouble has always been a common occurrence in the paper and related industries is well known. Various chemical methods of abating and preventing slimes have been more or less described in Technical Association of the Pulp and Paper Industry Special Report No. 68, "Slime Troubles", issued April 29, 1927. This report contains 33 memorandas, of which number 11 refer to chlorination in some form. These are obviously practical experiences, and to these we add the following obtained from Institute sources:

Mill Manufacturing Book Coating and Music Papers

Capacity, 40,000 lbs. per 24 hrs. Filtered surface water is used at this plant. The system is not a closed one. They were troubled by slime growths which made it necessary to take down and thoroughly clean their entire pipe system every few weeks. They also had trouble in obtaining proper floc prior to filtration and by putrefaction in their rather long time settling basin. The application of chlorine was started in October, 1925, treating 2,000,000 gallons per day at the rate of 4 ppm. The chlorine was introduced at the inlet to the settling basin just ahead of the alum feed. From 0.1 to 0.2 ppm excess chlorine was carried throughout the plant. As a result they were able to reduce the amount of alum and obtain a more satisfactory uniform color in the effluent from the filters. They were no longer troubled by putrefaction in the settling basin. They were no longer troubled by growths of slime in their pipe system. Trouble with slime spots in the paper was eliminated. The water after filtration and before going to the storage tank is passed over condensers to serve as condenser water. As a result of using chlorine another improvement was noticed, namely, an improvement in their vacuum. The success of this installation resulted in a second order to equip a mill producing index and bristol boards, capacity 50,000 pounds per 24 hours. This plant was put in operation applying 6 ppm to the supply of 1,000,000 gals. per day. The residual chlorine throughout the plant varied from 0.1 to 0.2 ppm. The results are similar to the first plant equipped.

Mill Manufacturing Saturating and Deadening Felts

Capacity, 160,000 lbs. per 24 hrs. This plant operates a partially closed system. The work to date has been confined to one 40 ton paper machine. Raw water is introduced at the fresh water showers and felt washers. The chlorine applied at rates from 55 to 65 pounds per 24 hours. This maintains a residual content from 0.1 to 0.3 ppm. The treatment results in cleaner screens and felts with much longer service from them. The stock going on the machine is treated in the mixing box. At the start the rate of chlorine feed was 500 pounds per 24 hours. The residual chlorine at the screens on the paper machine varies from 0.1 to 2 ppm. The rate of chlorine application varies from 400 pounds down to 100 pounds per 24 hours. This treatment eliminates the difficulty from slime spots in the paper.

Mill Manufacturing Box Boards

Capacity, 30,000 lbs. per 24 hrs. Before using chlorine it was necessary to clean out the stock boxes daily in warm weather and weekly in cold weather to keep down the trouble from slime spots in the paper. The fresh surface water supply was treated with chlorine at the rate of 30 pounds per day. The rate of water flow was estimated at 500,000 gallons per day. The chlorine was applied in the pump suction. The residual chlorine amounted to 0.5 ppm after one-half hour. The treatment stopped the formation of slime in the pipes and head boxes and eliminated the trouble with slime spots in the paper.

Mill Manufacturing News and Chip Board

Capacity, 40,000 lbs. per day. Chlorine is applied to the 500,000 gallon per day surface water supply at a rate of from 4 to 7 ppm. The residual chlorine varies from 1 to 2 ppm. Results have been very satisfactory ever since the process was started in July, 1926. Testimony to this effect is given in the following account of the mill superintendent:

"Some time ago I was requested by your representative to let you know how the process was working and the results we are getting.

"I cannot recommend it too highly, as it has straightened out our trouble with slime. Before we put in the chlorinator on our paper machine which makes a great deal of .009 Point Paper, the slime would collect in the vats and pipes and get so thick that it would let loose and come out of the water with the pulp on the cylinder and break down the paper, and there would be no end of trouble. Before the chlorinator was installed we had to wash up the machine every other day and sometimes more often in order to eliminate slime, and then it would run for about one-half to one hour with slime spots in the paper. Since the installation of the chlorinator, we run a full week with no shut down and no slime spots ever come over or out of the vats.

"I wish to state that this chlorine is put into our suction line ahead of the pump at the rate of 25 lbs. of chlorine every 24 hours. Our chlorine comes in 100 lb. tubes, which are hooked on to the chlorinator and each tube lasts four days. The chlorine has no ill effects on the pipes, felts, wires or anything else that it comes into contact with. I also wish to state that this same chlorine water is used in our boilers with no ill effects. The water has been analyzed from our boilers at the water column and once from the blow-off, and no trace of chlorine was found."

Mill Manufacturing Boards and Felts

Capacity, 100,000 lbs. per day. The chlorine is applied to the suction of the raw water pump at the rate of 5 ppm. Forty pounds per day are required for the supply of 1,000,000 gals. We have no record of the residual chlorine throughout the system but it was evidently sufficient as reports show that the slime troubles were eliminated.

Mill Manufacturing Wheat and Oat Straw Board for Corrugated Goods and for Filler in Container Board

At this plant it has been found advantageous to use "chlorinated copperas" containing an excess of chlorine, at the feed box of the paper machine. As a result this mill has been able to operate on a nearly closed system thus lessening stream pollution; has reduced the lime necessary for cooking the straw by about 45%; the straw consumed per ton of board produced by 25%; the machine speed is increased; the number of breaks in the sheet is reduced; the washings on the wet end reduced; and the quality of the board improved slightly. These returns very greatly offset the entire cost of chlorination. The mill is now experimenting in an effort to operate on a closed system and thus entirely solve their stream pollution problem.

Mill Manufacturing Plain Chip, News Board, News Lined Chip, etc.

Capacity, 300,000 lbs. per 24 hours. Surface water is used with a rapid sand filter plant. Daily water consumption—1,800,000 gallons. Sliming of the filter sand reduced the filter capacity so

* Prepared for C. M. Baker, Engineer, American Paper and Pulp Association, Madison, Wis., by The Chlorine Institute, Inc., 30 East 42nd street, New York City.

there was not sufficient fresh water for all of the showers on three board machines. Chlorine was applied in the suction of the raw water pump at the rate of 125 lbs. of chlorine per day. The residual chlorine content at the showers varies from 0.4 p.p.m. to 1.0 p.p.m. The process has been in operation five months. The results are entirely satisfactory. The filter sand remains clean and the capacity of the filters is now sufficient for all purposes. They no longer have any slime trouble anywhere in the plant.

Mill Manufacturing Jute and Test Chip for Containers

Capacity, 110,000 lbs. per 24 hours. This plant uses two-thirds surface water and one-third well water. Total consumption approximately 2,000,000 gallons per day. Chlorine is applied to the fresh water at the rate of 120 pounds per day. All slime trouble has been entirely eliminated. The felts give longer service. They have been able to discontinue the use of alum to prevent undue formation of foam. This saving alone amounts to $22.00 per day. The superintendent of this plant has recommended the use of chlorine to all of the mills in his vicinity and two more installations have been made since this mill started operating in April, 1928.

Mill Manufacturing Deadening and Saturating Felts

Capacity, 150.000 lbs. per 24 hours. This plant operates an entirely closed water system. The original water supply is from a highly polluted river and is unfiltered. Chlorine is applied in the recirculated white water at the rate of 150 lbs. per day. Their trouble with slime was not considered to be a very serious matter but the total number of spots in the paper has been reduced 90% by the use of chlorine. Unfortunately no differentiation has been made between true slime and wool spots.

Mill Manufacturing Rope, Paper and Specialties

Capacity, 20,000 lbs. per 24 hours. Chlorine is applied in the recirculated white water used to dilute the stock at the head boxes at the rate of 10 pounds per 200,000 gallons. Since using chlorine the felts give 34 days service to be compared with 23 days previously. All trouble with slime has been eliminated. They do not have to blow down the rolls with steam any more. They now have a general clean-up every two weeks instead of every week. There is a saving of $36.00 per day in bags which were formerly discarded because of slime spots. The chlorine costs just a little over $1.00 a day.

Mill Manufacturing White Manila, Kraft, Brown Fiber Specialties, Test Board, etc.

Capacity, 280,000 lbs. per 24 hours. This plant operates three board machines. One of them is operated with a closed water system. Chlorine at the rate of 50 lbs. per day is applied in the recirculated white water used to dilute the stock at the head boxes. All trouble with slime has been eliminated and it is planned to close the water systems on the other machines and install chlorinators.

Mill Manufacturing Glassine and Manifold Papers

Capacity, 36,000 lbs. per 24 hours. The water consumption at this plant amounts to 1,000,000 gallons per day. Chlorine is applied to the fresh water at the rate of 50 lbs per day. They were troubled with slime deposits throughout the water system and with slime spots in the products. The use of chlorine has done away with all of this trouble.

Publication References

STAINS ON PAPER. G. Dalen. (Mttlg. K. Materialpruefungs-Amt Gross Lichterfelde West 24, 235-45. Dec. 1906. K. Materialpruefungs-Amt, Gross Lichterfelde W. Abt. 3; Abstracted, Chem. Ztr. Bl., 1907, I, pp. 912.) The author distinguishes 3 groups of stains. 1. Such being darker than the surounding paper when the light falls upon them and lighter when the light shines through. (Resin, fat, sand, foam, nodes, fibers, waste paper, lime, starch, etc.). 2. Such being darker than the surrounding paper if the light falls on them or shines through. (Iron, bronze, lead colour, fiber, flax, hemp, fungoid stans, etc.). 3. Those which are not visible in the raw paper but appear later on in the manufacture. (Fiber nodes, sulfite, chloride of lime, starch, resin, fat sand, wooddust, etc). The author discusses the different groups thoroughly and gives a way of determining the type of stains. Upon treatment with ether and alcohol, fat and resin stains either disappear entirely or they become non-transparent. Glue stains are readily soluble, tar colours run out upon alcohol treatment. A white remainder may be gypsum or sulfite. The former is recognizable by Mk, the latter by iodized starch. Iron is detected by Berlin blue reaction and starch by iodine solution. Potassium iodide and starch or Wurster's Di-solution are used to determine free Cl, and chloride of lime respectively. * * *

ALGAE IN MILL WATER. Paper, Dec. 20, 1911. Vol VI, No. 1, p. 14. The chemist employed by a large mill in England experienced trouble with the water supply of the establishment, the presence of a fine green vegetable growth that clogged the screens over the inlets proving notably troublesome. Copper sulphate was tried, to the limit permitted for chemical reasons, without effect, and chloride of lime could not be used. He then bethought himself of the electrolytic generation of chlorine from common salt and installed a simple apparatus for this purpose that consumed about 60 pounds of salt in ten hours and could be operated by the mill's electric current. The daily expense was about twelve cents. The electrolytic apparatus was installed at the edge of the reservoir, where the water came in, and was connected by cable with the factory. A correspondent of the Papier Zeitung reports it as having been in operation for five months without derangement and giving perfect satisfaction. Within three days the algae, or fungoid growths, dropped to the bottom of the reservoir; in fourteen days they had disappeared and the water was clear and transparent to the bottom, a depth of eight feet. The stones at the bottom and on the sides had regained their proper color. Chemical tests made at the outflow pipe from the reservoir revealed no trace of free chlorine, and at no point did the water show the least flavor or odor of it.

A CHEMITECHNOLOGICAL STUDY OF RAG PULP. A. R. Voraberger. (Papierfabrikant). Paper, May 29, 1912, Vol. VII, No. 11, p. 25. * * * The slimy matter which separates in the initial stages of the maceration from the rags, and which the author calls foam, is the greater, the coarses and firmer the rags are. The chemical and physical behavior of this foam are very similar to those of animal substances, particularly occasioning the formation of ammonia as stated by L. Piette in his handbook of papermaking in 1833. It was the development of this slime which led to the substitution in England of another process for that of maceration, the so-called bucket method. A wooden bucket with a copper bottom was used which was placed on a stove. A wooden grating was placed inside on the bottom on which the rags were piled. For each 200 lb. of rags 8 lb. of potash were used, the solution being poured into the bucket and water added until all the rags were covered with liquid. The rags were then boiled for three hours, washed in clean water and bleached with a solution of chlorinated lime. * * *

WATER IN PAPERMAKLNG. Churchill Hungerford. Paper, Dec. 18, 1912, Vol. X, No. 1, p. 31, etc. — * * * p. 32/33. In a few extreme instances the streams show pollution to such a degree that the matter precipitated by the alum is not only redissolved by bacterial action in the sludge at the bottom of the chamber; thus liberating much of the precipitated matter, but large quantities of gas are generated which tend to buoy the sludge to the surface, nullifying the objects aimed at in the settling basin. Where this condition is encountered—and fortunately such cases are rare—antiseptic treatment of the water must be resorted to and hypochlorite of lime, or, as it is more familiarly known, chemical or bleaching powder, is the agent which entirely arrests this process of fermentation. Usually from sixteen to twenty-four pounds of bleaching powder per million gallons of water will entirely stop the process of fermentation and the alum, if properly applied, will then perform its full duty and cause the settling basin

to remove a very large proportion of the suspended matter. Of the alum and hypochlorite of lime used no trace of either, as such, remains in the filtered water when the chemical feeds are correctly adjusted. The alum is decomposed into its original elements and is filtered out, and the hypochlorite of lime (calcium hypochlorite) is changed into a substance very similar to common table salt. * * * *

REPORT OF THE GROUNDWOOD COMMITTEE. Technical Association Papers. Series II. February, 1919. p. 104 et seq. (Papers, Reports, Lectures and Addresses at Fourth Annual Meeting of the Technical Association of the Pulp and Paper Industry.)—*Fungus Growths on Pulp.* *** p. 106. Mr. John Stadler (Belgo Canadian Paper Co., Ltd., Shawinigan Falls, Que.) "Everybody who makes and stores pulp has probably had a dose of this. What I should like to know is whether any of the mills have tried a preventive. We are convinced that it is a fungus growth, which, it is stated, can be eliminated by sterilization. By sterilization we mean that when we make the pulp we add chemicals to the water in which we grind the pulp—this refers to the circulating water in the grinder and wetroom. I suppose you all circulate the water with as little loss as possible. Now, if we add to this water a certain amount of chloride of lime, that seems to help. We have been practically storing no pulp this year, but a couple of years ago we had some stored, and at that time a certain amount of the pulp which had been treated with chloride of lime apparently had not been affected, whereas other pulp had been. I am, therefore, inclined to think that if you put enough chemicals into your circulating water you can prevent the fungus. I am sure some of the other men have probably tried it, and it would be interesting to know what results they have had." * * *

GENERAL SESSION ON WASTE AND PAPER DRYING. Technical Association Papers. June, 1923. Series VI, No. 1. p. 163 et seq. (Presented before the Technical Association of the Pulp and Paper Industry.)—*Slime and Its Prevention*—* * * p. 165.—F. M. Williams (Williams Apparatus Co., Watertown, N. Y.). "I would like to ask if anybody has ever made any investigation as to how much chlorination is required to inhibit or prevent bacterial growth, which is the cause of slime? If so, how practical it would be to use a slight amount of chlorination there, and whether or not the cost of the chlorination would be greater than the product obtained?" C. B. Thorne (Riordan Co., Ltd., Hawkesbury, Ont.) "Mr. Chairman, about the pit bottom, in the last twenty years we have had all kinds of blow-pit bottoms, and we found generally the wood bottom unsatisfactory as the holes enlarged when we had used them a while. We got sick of using wood and started to investigate the tile bottoms, as they are made in Europe, and since then we use nothing else. The reason we cut out the wood was, first, because of the fact that there was a lot of repairing in connection with its use. Next we found that we could get very much smaller holes and keep them clean in tile, but it depends very much on how those holes are constructed. I get them, from Sweden, and they are made by the best manufacturers in Northern Europe. Germany also manufactures them. These tiles vary; they come in different sizes and with different sized soles, just as you desire them. You can get them down to one millimeter, one twenty-fifth of an inch, and they take, say, 12 or 18 holes of a small size, let them discharge into a larger hole perhaps of three-quarter inch size underneath. Our experience has shown that with tile linings we are losing little fiber; they are cheaper to keep up, only when you install them you have to be careful to support them well, otherwise when you blow a digester and the tile is not supported evenly, it will tend to break the tile. You cannot get these tiles in America. I have made a very thorough investigation on that. As to savealls in sulphite mills, I suppose I have seen the most perfect savealls in Europe. You can make a tank square or round, for a sedimentation saveall, so long as you make the tank large enough, but the fiber that you get, where you are using high grade pulp, can hardly be put back into your pulp again on account of the slime. The slime in unbleached sulphite, as many of you know, is very bothersome in the summer time and so far there has been no remedy found for it, that I know of. This slime, you know, comes in lumps once in a while, and you don't know where it comes from. It may come from your pipes or from some of your vats. But, wherever it comes from, you cannot sell your pulp with the slime in it. At the Walthoff Mill in Tilsit, Germany, I saw a very splendid system which had just been installed. They had to install it because they were allowed to let only so many grams per ton, per metric ton, go into the river. They did nothing else but settle in square tanks. If you have a well managed sulphite mill, with good mill control, you are losing very little good fiber. But if you get only a small amount of fiber, it is a question of what you are going to do with it. You can't put it back in a sulphite mill. I think in sulphite mills this is where the difficuty comes in: What kind of paper are you going to make out of this pulp that you get? I must give the Germans credit for finding a way to do that. The mill I referred to made a most splendid paper out of these savings. So I think you have to figure whether you are getting enough waste so you can pay for the installation of settling basins and so you can make them pay by making your own paper from the material; or will it never pay you enough money to get back the interest on your capital expended? You have to take those things into consideration. In regard to the fungus that is formed in this water—slime you call it—we have made an investigation and we find that when we are making bleached pulp we have no more trouble with the slime because the chlorine fixed that. However, when we were making unbleached fiber, we made a very thorough investigation to find a method, that would not be too expensive, to kill the fungus. We started in, of course, by buying a very expensive outfit for chlorine treatment, and we thought that would be tip-top. I am not an expert on fungus, but when you start and get a little information about it, you become very much interested. The fungus is a very strong person, if one can refer to it as such. By and by he is drinking so much chlorine that it doesn't hurt him any more unless he gets it in very large quantities—something like alcohol. (Laughter) We found with this very expensive outfit of ours that we killed them for two weeks, but then the fellow started to live pretty well; we had to give him a heavy dose, but it didn't help, so finally we gave it up. We could not afford to give him all the dose he required. We had a professor on fungus, who came up and charged us a couple of hundred dollars a day and worked in the laboratory, and sent us a bill of two or three thousand dollars, and with the result that he couldn't tell us anything. (Laughter). There is where we stand on fungus in the unbleached sulphur business. Certain fungi live on sulphurous acid, that is their main food. That is what we found: you practically are feeding a certain kind of fungus in your mill the very best food that he wants. That is the funny part of it.

THE MANUFACTURE OF PULP AND PAPER. A Textbook of Modern Pulp and Paper Mill Practice. Prepared Under the Direction of the Joint Executive Committee on Vocational Education Representing the Pulp and Paper Industry of the United States and Canada. 1924. Vol. IV, Section 6, pp. 45/46. (McGraw-Hill Book Co., Inc., N. Y.)—*Slime Spots.*—Slime spots will often cause breaks; these spots come from the inside of the screens, from the pumps, and from the pipes on the entering side. Slime spots slip through the screen plates, when the plates are old and in poor condition, because the slots are then so large that the slime passes readily.

Every Mill a Problem

It will be noted from the foregoing that chlorination is practical, effective and apparently inexpensive for a given operation; but we wish to point out carefully that it is a case of "each tub on its own bottom." What may be good at one mill may not be suitable at another mill, not because the problem is unsolvable, but because of differences in water, closed systems or open systems, colored or uncolored papers, differences in stock, etc., etc. Each mill is a separate problem and should be studied carefully.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

Machinery

Barking Drum. P. P. Westbye. U. S. pat. 1,667,996, May 1, 1928. The drum comprises a series of rings having integral inwardly projecting teeth, with a number of channel bars secured over the crowns of the teeth, thus forming a longitudinally slotted cylinder.—A.P.-C.

Apparatus for Debarking Pulpwood Slabs. R. H. Pangborn U. S. pat. 1,673,265, June 12, 1928. The process consists essentially in moving a slab axially past a series of rotating cutter heads, each of which is offset from the position of the others relative to the slab; guiding the slab in its motion past the cutter heads; pressing the cutter heads into the slab, and limiting the downward motion of the cutter heads by the height of the wood of the slab under the bark being removed.—A.P.-C.

Barking Drum. C. Royem assignor to H. W. Guettler. U. S. pat. 1,655,628, Jan. 10. 1928. In the U-bar type of drum (H. W. Guettler's U. S. pat. 1,311,225 and 1,311,226 of July 29, 1919), opposed faces of adjacent U-bars are at an angle of approximately 45 degrees to each other, while the faces of each bar are at an angle of approximately 50 degrees to each other and 25 degrees to the radius of the drum. With this construction logs of certain lengths sometimes wedge or jam endwise between the bars of the drum. By using bars having their sides at an angle of about 90 degrees, or at least sufficient to produce a "relieving" angle between the faces of the bars and the ends of the logs, this wedging is eliminated. "Relieving" means that, with a log contrasting with two complementary bar faces, the angle between the face of the bar and the log end contacting with it diverges towards the drum center, and is such as to prevent jamming of the log.—A.P.-C.

Method of Charging Pulp Digesters. E. Olsson. U. S. pat. 1,653,307, Dec. 20, 1927. The chips are introduced together with the liquor and the force of the liquor stream is used to pack the chips. The liquor is pumped under relatively high pressure (e.g., about 60 pounds per square inch) through a nozzle which may be directed against different portions of the chips, and the rate of charging of the chips and of introduction of the liquor is so regulated that the chips will not float nor be covered by the liquor but will be packed thereby.—A.P.-C.

Wet Machine. J. Stephansen. U. S. pat. 1,650,100, Nov. 22, 1927. The portion of the cylinder mold which is not covered by the travelling wire or felt is protected by a closely-lying cap or cover plate to prevent access of air, which would unnecessarily reduce the vacuum inside the cylinder and reduce the efficiency thereof.—A.P.-C.

A New Pulp Screen. Anon. Pulp and Paper Mag. Can. 26, 774 (June 7, 1928). A brief illustrated description of the new outward-flow screen of the American Paper Machinery & Engineering Works, which has a capacity of 50 to 75 tons per day with a power consumption of about 35 horsepower.—A.P.-C.

Kamyr Wet Machines With Feltless Presses. Anon. Pulp Paper Mag. Can. 26, 711-712 (May 24, 1928). A brief description of the machine.—A.P.-C.

Automatic Pressure Regulator for Jordans. W. P. Feeney. U. S. pat. 1,650,938, Nov. 29, 1927. The stock is pumped to the jordan under a pressure slightly greater than that desired in the jordan. The intake pipe of the jordan is provided with a T-joint, to which is connected a pipe, the open end of which extends into a suitable reservoir and is covered with a cap. The latter is connected with a lever arm the free end of which carries adjustable weights by means of which the pressure on the cap may be regulated to that desired in the jordan. The stock in the pipe forces the cap back until the pressure just balances that on the cap. The stock overflowing through the T-joint into the reservoir is returned to the main supply. Provision is made for raising the cap out of its operating position so that the jordan may be shut down without stopping the pump.—A.P.-C.

Slice for Fourdrinier Paper Machines. R. E. Heisel assignor to the Mead Pulp & Paper Co. U. S. pat 1,648,229, Nov. 8, 1927. The slice comprises an upper plate provided along its rear edge with an enlargement substantially circular in cross section and provided at its ends with extensions in the nature of stub shafts journalled in the side walls of the flow box. Mounted within the outlet opening of the flow box is a curved plate, the front edge of which is recessed to receive the enlargement of the lip plate, and a retaining plate holds the enlargement in position. Below the upper lip plate is mounted a thin flexible plate (e.g., of brass), and means are provided for adjusting its positon relative to the apron at numerous points along its length so as to obtain a uniform layer of stock across the whole width of the machine. The position of the lip as a whole can also be adjusted and the lip can be raised out of operating position, together with the apron, to allow of removing the breast roll when changing the wire.—A.P.-C.

Paper Machine Breast Roll. W. H. Millspaugh assignor to The Paper & Textile Machinery Co. U. S. pat. 1,653,817, Dec. 27, 1927. In order to lighten the weight of the shake portions of the machine, the breast roll is mounted on a fixed shaft about which it rotates. In the heads of the breast roll are fixed radial and end thrust and anti-friction bearings constructed so as to effectually protect them against the entrance of dust and water. —A.P.-C.

Suction Box. E. E. Berry assignor to Beloit Iron Works. U. S. pat. 1,644,867, Oct. 11, 1927. The suction box has a perforated top formed of compressed graphitic carbon.—A.P.-C.

Suction Box for Paper Machines. F. J. Latham assignor to Oxford Paper Co. U. S. pat. 1,657,509, Jan 31, 1928. The cover of the suction box comprises a wooden block having the longitudinal grain of the wood extending at right angles to the path of the wire and so arranged that the annual rings in the face of the block extend crosswise of the wire.—A.P.-C.

Suction Box for Paper Machines. J. W. Vedder assignor to Rice, Barton & Fales, Inc. U. S. pat. 1,664,801, April 3, 1928. The suction box comprises a pair of side plates of a metal consisting mainly of aluminum each extending in one piece from the bottom to the top and has a horizontal bottom and a horizontal partition, each formed of a plate of the same metal. The bottom and partition are located entirely between the sides and are riveted by aluminum rivets on the inner surface of the side pieces so as to provide a sealed joint along each side of the bottom and partition.—A.P.-C.

Doctor Mechanism for Papermaking Machines. N. and G. Duxbury. Eng. pat. 282,961. Each end of a carrier, to which the doctor is rigidly secured, is connected by a pair of links to a bracket fixed relatively to the roll to which it appertains, one of the links of the pair being pivoted to the carrier at, or towards, the forward part, and the other link of the pair being pivoted to the carrier at the rear part, so that the operative edge of the doctor is maintained parallel with the longitudinal axis of the roll during the movement of the carrier and the doctor se-

cured thereto toward or away from the roll, and the angle to which the doctor is transversely set to the rod is also maintained.—A.P.-C.

Esparto Paper Making. J. D. Law. World's Paper Trade Rev. 89, 978-982 (March 23, 1928). A detailed description of the starting up of large machines for esparto papers, capable of turning out 100 tons of paper per 130-hour week.—A.P.C.

Wire Cloths for Paper Machines. R. Franck. Eng. pat. 283,-180. The junction of an endless wire cloth used in paper machines is made by incorporating fusible weft wires in the woven body to form the seam and cutting the ends short near these special wires so as form a real channel. The fusible wires may comprise a core of non-fusible metal coated with fusible metal or a combination of two wires, one of non-fusible metal and the other of fusible metal, may be used, the joint being made by fusion.—A.P.-C.

Machine Glazed Paper. P. Olier. Papier 31, 425-428 (April 1928). Practical operating hints.—A.P.-C.

Device for Continuous Indication of Variations in the Thickness of Paper. Raymond de Montgolfier. Addn. No. 32, 760 to Fr. pat. 608,977. The original patent covers a device based on variations in friction produced by the sheet, and consists essentially in a roll over which passes the sheet and which transmits the variations to a second movable roll and thence to a member controlling the indicating pointer, the degree of friction being regulated by means of a micrometer screw which supports the movable part of the device. The present addition covers improvements by means of which the magnitude of the variation may be indicated. This is obtained by utilizing the eccentricity of a suitably balanced pulley which is connected to a counter weight so as to make it exert a constant frictional force on the paper. As long as the thickness of the paper remains constant, the position of the pulley does not change; but when the thickness varies the pulley turns in one direction or the other according to the sign and degree of variation.—A.P.-C.

A New Fourdrinier Paper Machine Table. Maurice Cartiaux, Jr. Papier 31, 321-323 (March 1928). In paper machine tables as at present constructed the table rolls are closest near the breast roll and the space between them is gradually increased on passing towards the couch. By reversing this procedure (the exact spacing between the table rolls depending on the construction of the machine and the grade of paper), it is claimed that a stronger sheet, better formation, greater output per hour and saving in stock and filler can be obtained.—A.P.-C.

Device for Eliminating Bubbles and Improving Formation on Fourdrinier Paper Machines. C. W. Valentine assignor to Bagley & Sewall Co. U. S. pat. 1,656,766, Jan. 17, 1928. A wiper roll, preferably made of rubber, is mounted over the wire near the breast roll and is provided with a large number of radial fins. It is so placed that several of the fins simultaneously dip into the layer of stock on the wire, but without coming into contact with the latter. It is driven so that the fins dipping in the stock travel in the same direction as, but at a slightly lower velocity than, the wire. As each of the fins leaves the stock, the surface of this fin has a wiping action on the stock surface, thus breaking down any bubbles that may be moving along on the surface of the stock. As the fins move at a slightly lower velocity than the stock, there is a tendency for the latter to pile up behind the fins causing an intermingling of the fibers which overcomes their tendency to distribute themselves lengthwise and improves the formation of the sheet.—A.P.-C.

Device for Eliminating Water from the Stock on the Wire of Paper Machines. V. Antoine. U. S. pat. 1,638,975, Aug. 16, 1927. The top couch roll is set back appreciably from the lower couch, so that the wire can be made to wrap around a relatively large arc of the upper couch before reaching the nip between the two rolls. Wipers consisting of flexible blades, brushes, etc., are applied to the lower face of the wire where it wraps around the upper couch to lead away the water forced through the wire by the pressure of the roll. The wipers are mounted so that the pressure with which they bear against the wire can be adjusted as required, or they may be mounted in a chamber which makes joint with the wire wrapped around the roll and which is connected to a suction pump.—A.P.-C.

Device for Removing Paper from the Carrying Felt on a Paper Machine. A. E. Cofrin. U. S. pat. 1,654,962, Jan. 3, 1928. Instead of passing the felt and paper through a press to make the paper adhere to one of the rolls from which it is then stipped by means of a doctor, a single roll is made to bear against the felt sufficiently to loosen the web therefrom, but not sufficiently to make it adhere to the roll. The paper can then be easily lifted off by hand and passed on to the next felt which carries it through the following press or driers.—A.P.-C.

Paper Web Carrier for Paper Machines. W. E. Sheehan. U. S. pat. 1,651,476, Dec. 6, 1927. The carrier consists essentially of an endless woven fabric base made of cotton, jute, or other suitable strong vegetable fiber yarn (which may be reinforced by rubberizing, if desired), and of a covering sheet or layer of wool (either carded wool, wool pounded into a felt, or wool spun and made into a fabric) the exposed or working face of which is smoothed and given the particular finish required for the work for which it is intended. The base and covering sheet are united by means of a suitable elastic adhesive, such as a rubber cement, insoluble in water. When the carrier is to be used in place of an ordinary pick-up felt and does not require to be porous, the adhesive is laid on in a continuous sheet; while if it is to be used as a drainage felt to facilitate removal of water from the paper web, the adhesive is laid on in such a manner that it is porous instead of continuous, and the base on which it is laid is preferably of a coarser weave. It is claimed that such a carrier is both stronger and more durable than the felts used at the present time.—A.P.-C.

Rope Paper-Carrier for Paper Machines. J. F. Thibedeau, A. Deguire, W. Turner and A. McDermid assignors to the Spanish River Pulp & Paper Mills, Ltd. U. S. pat. 1,646,044, Oct. 18, 1927. In order that the rope carriers may not be uselessly worn out by constant running and in order that they may be renewed when necessary without having to shut down the machine, thus interrupting production, the rolls around which both the ropes and paper pass are provided with guide sheaves for the ropes, and such sheaves do not normally rotate with the rolls. The drive mechanism for the sheaves includes a normally loose belt which may be instantly tightened whenever the rope carrier is needed to pick up a lead strip.—A.P.-C.

Device for Controlling the Temperature of the Driers and the Moisture Content of Paper on the Machine. G. S. Witham, Jr. U. S. pat. 1,646,515, Oct. 25, 1927. The admission of steam to each section of the driers is controlled by a diaphram valve which in turn is controlled by fluid under pressure which is admitted to the diaphragm chamber to open or close the steam valve according as the temperature falls below or rises above a predetermined value. The last section of the driers (nearest the calenders) can also be fed live steam if there is insufficient exhaust steam to raise the temperature to the desired point. A thermostatic element placed on a selected drier in each section acts on a valve controlling the pressure of the fluid admitted to the diaphragm valve. The arrangement is such that a uniform temperature is maintained in each section and increases gradually in the several sections from the wet end to the dry end. The moisture content of the sheet (preferably near or at the calenders) is obtained by passing a current of air through a tester in contact with the paper and then over a wet and dry bulb psychrometer connected to a differential valve controlling the fluid which operates the diaphragm valves. The admission of steam to the driers is thus regulated also according to the moisture content of the sheet and atmospheric conditions at the driers. The valves can be regulated to maintain any desired predetermined moisture content in the paper.—A.P.-C.

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Inventory Planning, Taking and Valuation*

By W. D. Bonthron [1]

Nothing in the whole field of accounting illustrates more admirably the breadth of the accounting field or the philosophy of accounting than the inventory.

Webster states that an inventory comprises the annual stock-taking of a business. It is evident that Webster wrote his definition of an inventory before modern cost-finding methods were adopted.

While inventories usually constitute the most important factor in the determination of the profit or loss in a business, they are generally determined or maintained throughout the year instead of being ascertained only by physical measurement at the end of the year. In consequence, the financial results of the operations of a business are determinable monthly instead of annually, as was the case before the introduction and adoption of modern cost-finding methods.

Some businesses which, because of monopolies enjoyed, may reap a large margin of profit, can possibly operate successfully on the basis of determining profits annually, but the large majority of concerns doing business on a competitive basis must know how much their profits or losses amount to monthly if they expect to survive and do full justice to the stockholders or other owners.

An Unnatural Year End

Right, here, it seems quite pertinent to refer to the fact that a large number of concerns have adopted and are using an unnatural year end. In most lines of business there is a point reached during the year when business is at a low ebb or inventories are at a minimum, which would make that date the natural one on which to close the year's operations and sum up the results. The levying of Federal Income Taxes on profits has to a far greater extent than any other factor contributed to the choice, by the great majority of corporations, of the end of the calendar year as the end of their business year.

While different rates of taxes have been levied on the profits of different years, no particular difficulty is presented in calculating the taxes applicable to the profits of a business having a fiscal year other than the calendar year nor is any additional expense involved in preparing the tax returns and subsequently arriving at a settlement with the Government.

Adoption of a natural year end will result in the particular business being able to present its financial position from the most favorable viewpoint. With inventories at the low point, liabilities should also be at the minimum. Furthermore, the cost of taking stock is naturally decreased and a greater degree of accuracy is achieved.

It would, in my opinion, be well worth while for each of you to devote some thought to this phase of the inventory question with the view of bringing the matter to the attention of the executive officers of your respective companies in the event you should reach the conclusion that in your case some date other than the one now in use would be preferable for ending the year's business.

The annual listing and valuation of stock, while naturally differing in method in accordance with the nature of the business, has been, through the application of modern methods of shop practice and accounting, fairly simplified and standardized, but nevertheless it usually involves a considerable but necessary expense not only on account of the direct salary and labor cost, but particularly because of the consequent interruption to production.

Brief Outline of a Physical Inventory

I would now present a brief outline of the methods which might be followed in the planning, taking and compiling of a physical inventory of a general manufacturing business of fair size. The methods I shall outline would not, of course, be suitable for all manufacturing businesses by reason of the peculiar conditions surrounding special businesses.

Formerly the taking of a physical inventory was looked on by most of the participants as an anniversary to be passed as quickly as possible. Seldom were there any pre-arranged plans. Naturally, many errors occurred and in those cases where error was apparent, recheck of the inventory resulted in larger expense being incurred than would have been the case had proper methods and plans been formulated and the staff engaged in the work imbued with a proper sense of its responsibilities. Nowadays, that kind of procedure is, relatively speaking, unusual.

First of all, the executive board of the company decides who shall be in charge of the inventory as a whole. Usually the comptroller, the chief cost accountant, the purchasing agent, the division managers or the department heads form the nucleus of the inventory organization, being assisted by the several shop superintendents and foremen, by assistants who make out the tags and list the items thereon, and by workers who handle and measure, count, weigh, or estimate the various inventory items. It is not unusual among large organizations for a chart of the personnel engaged on the work to be prepared and displayed for the information of all concerned.

* National Association of Cost Accountants Bulletin.
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The period in which operations should be suspended in the different departments is the next problem to be resolved. Complete cessation of operation, of course, tends to expedite the taking of the inventory.

Inventory Instructions

A pamphlet or typewritten statement of "Inventory Instructions" is then prepared, copies of which are distributed among the personnel, sufficiently in advance of stocktaking to permit a proper understanding of what is required of all concerned before the work actually is commenced. It is desirable, wherever possible, that the instructions be grouped so that each department be dealt with separately, thereby enabling the individuals to concentrate on the section of the work directly involving them as well as to obtain a general grasp of the requirements as a whole. To further ensure that the assistants understand what is required of them, it is the practice in some plants to hold group meetings, so that any instructions which appear to be ambiguous or incomprehensible may be further explained.

The "Inventory Instructions" generally contain a statement of the length of time allotted for the taking and checking of the inventory quantities, a list of the personnel in charge of the different sections of this work including the place where each may be found for purposes of reference, a list of the classes of product, materials and supplies to be inventoried, a description of the tags and forms to be used in taking inventory, preparatory instructions to be carried out before the count is commenced, the manner in which the different classes of inventory should be taken, recorded, checked and accounted for to the compiling staff and directing personnel, and the manner in which the cost of taking the inventory should be accounted for.

As to the time allotted for completion of the count and the list of personnel in charge, no comment is necessary.

The list of articles to be inventoried will contain a description and the location of the different classes of inventory such as finished products, work in process, finished parts stores, raw material stores, factory supplies, loose tools, excess stocks (where segregated), material set aside for a construction or experimental program but not already charged thereto in the accounts, fuel stores, and drums and other containers a charge for which has been made against the company by the respective vendors. The respective classes—in conformity with the general accounting classification—will be indicated by stating the relative account number against each group of items. Special reference will be made in this list to the necessary inclusion of merchandise of the company held on consignment by others and also to work in process and raw materials lying in the plants of others in the ordinary course of production where no charge has been made in the accounting records to the respective custodians.

Tags for Different Classes

In connection with the description of the tags and forms to be used in taking inventory, different colored tags might be adopted for different classes such as finished product and semi-finished product, or, as in the case of an automobile concern with two lines, for say four cylinder and six cylinder items, though this is not essential providing sufficient information is shown on the tags for the use of the compiling staff. This description should contain a list of standard abbreviations of technical names and units of measurement as well as detailed instructions as to what is required to be written on the tags and in what particular position or space on the tag it should appear. Specific instructions should be given as to the manner in which should be indicated obsolete stock, inactive stock, excess stock, damaged stock and stock carried for lines of production which have been or will be discontinued. Probably the most satisfactory kind of inventory tag in use is the original tag with duplicate tag attached, when the original tag is removed a full carbon copy description of the inventoried item remains on the duplicate tag. The blank tags will be numbered consecutively before they are issued. Some companies use what they call an "Inventory Short Tag" whereon are listed the parts short to complete the Unit or the assembly in process. The adoption of this tag enables satisfactory deduction to be made in respect of the material, labor and overhead to be subsequently added to the job before the cost of the complete unit or assembly is collected. In some cases, where it is desired to commence the count before the inventory date and before the official tags are available, a "preliminary" tag is used.

A record should be made of the numbers of the blank tags issued to the different superintendents against which the returned tags may be checked off. Superintendents should be strictly accountable for the tags issued to them and loans of tags to other superintendents should be forbidden. All spoiled or voided tags should be turned in with the unused blanks.

Other forms which might be used to advantage are a pro-forma memorandum for the use of the compiling staff in requesting additional information to be included on a tag an inventory release slip issued to the Department head when his department has been inventoried and checked, and a distinctive form for listing stock on the premises of others.

Preparatory Instructions

The preparatory instructions to be carried out usually include:

1—Instructions to the stores departments to clean up, to place all loose material in the proper bins, etc., to segregate and transfer to the Salvage Department all obsolete supplies and scrap, and, once the count in the stores has commenced, to issue no stores without authority of some specified official.

2—Instruction to the production departments to have all completely finished parts inspected and transferred to finished stores, to clean up and transfer all defective and spoiled work and scrapped material, to leave nothing under the benches or machines, and to have nothing on the floor to be inventoried but actual work in process which should be grouped by job numbers or other suitable classification. The use of the "Inventory Short Tag" will be brought to the attention of the production department heads in these instructions. At the same time, the advantage of having all assemblies completed will be pointed out and attention will be drawn to the fact that the Stores Department has received instructions not to issue any material once the count has commenced in the stores unless the requisition bears the O. K. of some specified official.

3—Instructions to the inspection department to inspect finished products and work in process available and to bring up to date their schedules of defective items requiring only minor repairs to make them into satisfactory product.

4—Instructions to the salvage department to inventory all the scrap or obsolete parts, supplies, etc., in its possession.

5—In addition, instructions are issued to the Receiving Room to hold all goods received after the commencement of inventory taking until the conclusion thereof. Goods so received prior to the close of business on the inventory date should properly be included in the inventory of material on hand and the corresponding liability taken up in the accounts. The date of receipt should be indicated on the inventory tag which should be affixed to the goods as they enter the receiving room and the receiving slip should be stamped "Inventoried" before being passed on to the purchasing agent or accounting department.

6—The purchasing department is required to list all invoices received for which the goods are not on hand at the close of business on the inventory date. It is considered proper to give effect in the accounts as of the closing date, to the purchase of all goods bought on the F. O. B. Vendor's Plant basis which were actually in transit on the last day of the period.

7—Similarly, the shipping department is instructed to ensure that all goods billed to customers but not shipped at the date of stock taking are not included in the inventory.

8—Instructions are also issued to the departments concerned, to exclude from the inventory any goods which are not the property

of the company, including goods held on consignment for others and special tools loaned to the company.

As to the manner in which the different classes of inventory should be taken, recorded, checked and accounted for to the compiling staff and directing personnel, the "inventory instructions" will outline the requirements specifically and in fairly great detail. In general, the points covered will be as follows:

Finished Goods

All finished goods should be in the finished goods stores before the count is begun. In the case of large articles capable of particular identification—for example, a finished automobile in an automobile plant—an inventory tag will be made out for each showing the type or model identification number and a reference as to what equipment is different from "standard" equipment. It may be found advisable to compile and use a "List of Standard Shortages" for parts which are not usually affixed to the finished units until shipment or delivery to the customer is made. If any finished unit should have any of these "Standard Shortages" affixed, the latter should be listed on the tag.

All finished goods of small dimensions should be counted or weighed twice. One tag should be affixed to only one receptacle. The tag should appear in a conspicuous position and should describe the item according to the list of standard abbreviations adopted, the unit of measurement also according to the list of standard abbreviations adopted, the receptacle number or the location, and the employment numbers of the counters.

As soon as a whole section of the finished stores has been completely inventoried, the checker should be informed. The checker, after satisfying himself, should append his O. K. and pull the original tag or in the case of the single tag the portion of the tag other than the stub. The original tags should be collected by the superintendents who signed for or were charged with the blank tags, so that they may have them checked off with the issue list.

Work in Process

The employees taking the inventory of work in process must be familiar with the manufacturing operations. In the case of standard operations it should be necessary to indicate in the space provided therefor, only the number or an abbreviated description of the last manufacturing operation completed, whereas, in the case of special orders it will sometimes be necessary to list each of the operations performed. Work in process should be collected before the count so that all mass production work completed to the same operation may be grouped together. On special work, of course, this cannot be done. The location of the items and the employment numbers of the counters and checkers should be indicated on the tag. Great care must be exercised in entering piece numbers, operation numbers, sizes or gauges of material, shorts or longs, rights or lefts, males or females, etc. It is in connection with the work in process on major assemblies that use is made of the "Inventory Short Tag" whereon are listed the parts short to complete the assembly in process in order that deduction may be made for material, labor and overhead which will be added in completing the assembly.

Raw Material

The points to be watched closely in connection with raw material usually deal with the standards of measurement to be adopted, including gauges, the different grades of the material, and the condition thereof, having in mind obsolete, inactive, excess or damaged stock and material purchased for production which has been discontinued or will be discontinued in the immediate future. The following are a few examples dealing with standards of measurement:

Bar Steel—Bar Steel will be listed in feet only.

Rough Cut Lumber in Mill—Rough cut lumber will be listed by board feet: kind, grade and size of lumber to be shown.

Glass—Glass which has been cut to size for use will be listed by the piece number, otherwise by size.

Goods on Consignment

Where it is not advisable to have company employees attend at the plants of consignees, fabricators, etc., for the purpose of taking a physical inventory of consigned goods, etc., a certified list of such material should be obtained from the consignee.

When the checkers have completed their work and the original tags have been turned over to the persons to whom the blank tags were issued, the superintendents or foremen will go round to see that everything has been inventoried, and will then report to the official in charge of the inventory. Inventory releases will then be issued and the men released. The stubs or duplicate tags may be left on the material until the compiling is completed or they may be pulled as soon as the release is given, depending on the particular conditions.

The original tags, voided tags and unused tags, having been accounted for by checking against the list of tags issued, the original tags will be handed to the compiling staff for entry on the inventory sheets.

Where re-counts are found necessary, the work should advisedly be done by persons other than those making the original count or check.

The instructions should state to what account number the time spent on inventory work should be charged. The cost of forms, tags, etc., should also be charged to this account. If any particular method of recording the time is desired, it should be set forth in the inventory instructions.

The compiling staff should sort and group the completed tags according to the accounting classification in use and then enter the details on the inventory sheets. East inventory sheet should be signed by the clerk.

As to the pricing of the inventory it seems immaterial whether the pricing is done on the tags or on the inventory sheets, but where the cost elements of material, labor and overhead are present, as in the work in process, it is usually more convenient for the pricing to be done on the tag.

The inventories should be priced, extended and checked for clerical accuracy by the cost department. The bases of pricing should be definitely indicated to the cost department by the inventory committee, preferably in writing. Where the lower of cost or market basis is adopted, the purchasing department should determine the current market prices to be used in the inventory valuation. Special valuations such as for obsolete, inactive, excess or damaged stock and material purchased for production which has been or will be immediately discontinued, should be referred to the inventory committee, especially where this inventory has heretofore been carried in the accounts at considerable value. On completion of extending and footing the inventory sheets, a summary of the values to be reflected in the accounts of the company should be prepared in conformity with the general accounting classification.

Now, we arrive at something that to my mind is a little more interesting.

Valuation

The significance of inventory values is underestimated, even by accountants. On the balance sheet of a company an overvaluation of plant, land or other fixed assets by a given amount, results in a balance sheet just so much misrepresented. A similar overvaluation of inventory, besides having the same effect in misrepresenting the balance sheet, misrepresents also the operating profits, which is a far more serious thing.

After all, a stockholder looks forward to his company continuing in business indefinitely; his company is a machine to make profits, and he looks forward to profits—only to profits—as representing what he will get out of it. The assets are a tool: the better the tool the better the chance of profit. If the fixed assets be of great cost, that is a factor tending toward stability since

damaging competition is made more difficult; but their cost is of importance only as it bears on stability of profit. Similarly, assets that are not replaceable are a factor producing stability. There are companies whose tangible assets are small, but whose monopoly of a trade name, a formula, a patent, may be the main factor in producing profit. In such cases, the intangible asset may have a book value, but the value placed upon it may vary widely without sensible effect upon the standing of the company.

An overvaluation of fixed assets therefore if not outrageously excessive is not of itself sufficient to affect vitally the prospect of future profit or the value of the company's stock.

Future profits are to be judged generally by the profits of the past and present; the present value of a company continuing permanently in business is measured by its prospect of future profit and by that alone.

If a paper profit be made by increasing the value of fixed plant, either because of a general rise of prices or for other reasons, it is, if a profit at all, a non-recurring profit—not a precedent—does not signify at best more than a non-productive increase in the price tag, and cannot be repeated indefinitely.

But an over-valuation of inventory results in an apparent direct increase of operating profit, it promises higher profits indefinitely. It places a false hope before us; and the disillusionment that follows when the results of later operations are known is doubled by the false lowering of subsequent apparent profit in the period that has to absorb the overvalued inventory.

We have all seen stock floated on padded earnings, at excessive prices, exaggerated losses immediately following with unjustified fall in selling prices of the stock, and injury to the reputation of those responsible for the flotation.

If persons who contemplate flotation of stocks and try to dress windows by means of inventory padding would realize how soon their sins will find them out, they would fear this particular iniquity. Bankers have gone far toward realization of the dangers of inventory overvaluation, and some have cried out, "Let the auditors take the inventories." We thank them for the implied compliment, that we know the value of anything when we see it, but although we really do know quite a lot, there are limits, and we do not intend to transgress them.

The ideal accountant in the minds of these men, seems to be a person who can, on the one hand, distinguish between Chinese and Russian bristles, and estimate the weight and value of a pile of iron ore, while on the other, he is simultaneously giving invaluable advice on involved organization and tax questions, checking books and preparing accounts in his spare time.

There is a whole philosophy embodied in the widely accepted convention that inventories should be valued at cost or market, whichever is the lower.

Authority for the use of this basis in the cases of going concerns is found in the Federal Reserve Bulletin and in the various Federal Revenue Acts and Regulations.

Cost is not enough. We have said "The lower of cost or market." That is, admittedly, illogical, especially from the point of view of the balance sheet. When accountants are governed entirely by logic their usefulness will be at an end.

True Test of Valuation

I should like to place emphasis on the need for estimation—for all accounts are really estimates —of profit in such a way as to show not profit as it may appear on some bookish theory, but profit as it would appear to one quite uninterested as to the profit of any short period, but wishing to state the profit, past and present, in such a way as to do justice to each period and leave the inventories in such a condition as to do no wrong to the future. The true test of valuation of an inventory from the point of view of the profit and loss account is, if that inventory were wiped out, would you willingly pay the amount at which you valued it to replace it exactly as it is? If not, you are placing a value upon it that is a burden on the future. If, on the other hand, you have an inventory that you would be willing to purchase at a higher price than the cost value upon it, you will be anticipating profit if you now take up that value in excess of cost. This method of valuing an inventory is hardly practicable, for one cannot expect consistent and reliable results if values are to be fixed in accordance with the opinion—perhaps influenced unconsciously by ill health or vagaries of disposition—of the owners of the inventory. Hence the use of the alternative value, "market." The value becomes cost, or the amount outsiders think it is worth, whichever is the lower.

Any manufacturing concern, if it would live, must be able to produce goods cheaper than it can buy them. Always it has goods on hand, manufactured but not sold. If it should take up these goods at a price above cost, the profit of the future would be anticipated. Hence the use of the alternative, "cost."

So far I have had in mind only the conditions governing statements of account of continuing businesses, or of enterprises whose values are to be computed wholly or in part on the basis of earnings. There are other conditions where the lower of cost or market is an unsatisfactory basis. Consider the case of a mine, having brought to the surface and perhaps smelted zinc or lead ore, let us say, at any extremely low cost, and the mine is to be sold. Clearly an inventory based on cost is wrong, and cost is lower than market. Here the profit and loss account is not a factor, but the value of the assets is. Only physical valuation will serve in such a case.

Where Cost Alone Cannot Govern

There are inventories, also, where cost alone cannot govern and there is no market. A prominent instance is that of motion picture films, partly used. I do not think many of you here know about it. The value to be set on them must be based on cost and must represent that proportion of cost corresponding to the proportion of their potential earnings not yet realized, but realizable. The cost accountant furnishes us with their original cost. Physical deterioration is negligible. While their useful life is determinable in terms of time, that, too, means nothing, since the earnings per week diminish with great rapidity. Experience tables, based on past results, are resorted to, and produce such results when employed on a large scale that the proportion of cost remaining in partly emploited pictures may be determined with a degree of accuracy that compares favorably with the determination of values of any inventories with which I am acquainted. Here there is a determination, the joint product of the cost accountant and the investigator, that could not be realized nearly so well by either acting alone. They are not taken at cost, not taken at market for there is no market, the owners would not sell them for any thing like the values at which they take them, outsiders would not buy them and could not use them, yet the values are satisfactory. They do represent the value that, given continuation of present conditions, will allow the business to continue, making a profit in about the same measure as at present. The future is not discounted, nor the past misrepresented.

There are cases where inventories must be valued at the amount that can be realized on forced sale, as in insolvencies. It is still "cost or market", but what market? Ordinarily, we mean the market in which the goods can be purchased in the quantities used by the business, under consideration, but here we mean the market price at which goods can be sold by a bankrupt concern. In these circumstances, work in progress—unfinished merchandise—is likely to lose most of its value, not because the goods have changed, but because the surrounding circumstances have changed.

On dissolution, inventories are often taken over by other companies, the price that will be obtainable will be between the forced sale and current values, according to the degree in which the inventory can be adapted to the use of the new owners.

Allowance for Deterioration

Perhaps the least satisfactory feature of inventory valuation is the allowance for goods deteriorated in condition, out of style, slow selling, or overstocked. The ordinary male accountant could hardly be asked, even by an amateur economist, to judge correctly how far, by adding perhaps a ruffle or something, or more probably by cutting off a few inches, an out-of-style line of dresses might be made salable. Owners of such stock are often bitterly opposed to taking their medecine and acknowledging the fact that they have purchased with poor judgment. Even merchants disposed in other matters to avoid overstatement of profit, dislike the writing down of inventories because of deterioration of any kind, and there is a real difficulty in ascertaining the amount that should be deducted from inventories on this account.

The accountant can, however, seek out materials long on hand or slow selling, and can generally form a pretty clear idea of the reason. He can learn much from the quantity of returned goods; and after doing everything else that is possible, he should put the owners of the merchandise on written record as to condition and value.

The Accountant's Verification

There is argument as to the extent to which an accountant should verify inventories, but there is no question as to the extreme need for him to get the best possible verification and valuation; and in getting it his best friend is the cost accountant.

We have said "cost or market". First as to cost, every accountant's first thought when an investigation of a manufacturing business is proposed is, what kind of a cost system and inventory record is there? With a satisfactory cost and inventory system it is almost impossible to deceive the accountant as to either quantities or costs. In theory, systematic fraud is possible but it implies such a degree of collusion and such faultless manipulation of accounts, that, given a good cost system properly carried out and properly coordinated with the general books, the chances of successful deception on a considerable scale are almost negligible.

So, in such cases, the cost factor may be considered as pretty well provided for. It is true that there is variation of opinion as to certain items whether they should or should not be included in cost, but the satisfactory cost system will show what they are and allowance may be made, if necessary, in view of the requirements of the particular case.

Leans Heavily on Cost Man

Here the general accountant leans heavily upon the cost man; and as a whole, his support has been such as to justify that leaning. It is not my intention to speak at length on the virtues of cost accountants; they do not need any praise from me but I would be ungrateful should I fail to acknowledge the debt the investigating accountant owes to the cost accountant who has preceded him.

We have seen that circumstances may affect the basis on which inventories are to be valued, and that no rigid rules for valuation can be applied indiscriminately. Discretion and good judgment are needed. It would be fortunate for us if some invariable plan could be followed; not only is it difficult for us to choose always the best values, but, having chosen them, we must convince clients often against their will, that our views are correct.

Having in mind that accounting is not an end in itself but a facility for the successful conduct of business, we may now consider the means available to accountants for verification of quantities and values.

First, as to quantities. The accountant should not actually weigh, measure, or count materials except in very unusual cases. Even if he does, the weight, measure or count is not conclusive. Who will say that the goods physically verified belonged to the company and had been taken up as a purchase? The question to be asked is not "What have you got?" but "What have you got and where did you get it?" And so the quantities indicated by satisfactory cost systems with their inseparable adjunct, good inventory records correlated to the general books, are a better guide than physical inspection by itself. If those "book inventories" are supported by physical examinations made by the owning company, and if the examining accountant makes a reasonable test of the book entries, they may be accepted without fear. Experience has demonstrated the insuperable character of the difficulties surrounding an attempt to overstate materially the inventories of a business where the competent cost accountant has done his work.

Other Tests of Inventory Quantities

There are, of course, other tests of inventory quantities, such as the rate of gross profit test, which covers both quantity and value, applied to the results as a whole and tested by examination of costs and sale prices of representative items. This is a valuable resource in any case, and increases in value inversely in the ratio that inventory records and costs systems are worse designed or worse kept.

With respect to values, in merchandising businesses cost is ascertained readily from purchase records and vouchers. This is the simplest case. In manufacturing enterprises cost of raw materials can be found in the same simple way; when we come to the manufacturing product, especially to work in progress, we need the cost accounts.

Before the general recognition of the merits of cost accounting, the valuation of manufactured material was largely a matter of estimate, and while for purposes of computing profit any method of valuing opening and closing inventories that is entirely consistent, will produce fairly correct results; valuations by estimated costs are not consistent. There are factors of honest error, of varying judgment under external influences, of intentional over—or under—valuation possible only because the auditor cannot closely check the values assigned.

Market values must be checked in each case with regard to the special conditions surrounding it.

Inventories may fall in value between the date of closing and the date accounts are made up. What shall we do then? I think that all ordinary variations may be considered as normal risks of the year in which they occur. Perhaps the prices will rise again. When a man has holed out at the sixteenth green, we may form a reasonable estimate of his probable total score. We cannot penalize his sixteenth hole because of an ordinary bunker visible on the seventeenth. Where fluctuations are extraordinary, as in the case of the great fall in raw silk after the war, other questions arise. How far is the inventory sold in advance at prices based on cost, and how far can the company rely on customers taking their commitments? It is as though the Mississippi flood had invaded the golf links; all previous signs fail.

Certainly something must be done by the accountant under these conditions. Perhaps a sufficient inventory reserve may be set up. If not, and if the loss is not taken out of the inventory before the accounts are made up, the accountant must be sure that none of his statements can be charged with giving the impression that no such loss has occurred or is impending. In each case, discretion must be used and neither an alarmist nor an optimistic spirit should be shown. A more specific rule cannot be laid down for dealing with these cases. Past experience has shown that they usually are dealt with by accountants so as to convey a reasonably correct view of existing conditions, but without making prophecies as to the future. Accountants are primarily historians, and while history may repeat itself, we are content to supply the history, leaving it to others to make application of it.

Conclusion

When going inventories are kept by means of perpetual inventory records, there are naturally adjustments which must be

made at the close of the year due to variations in quantities and to changes in price units of commodities. The general manager of a company will be inclined to criticize the cost department when the annual inventory falls short of the book inventory. Doubtless some of you have had the experience. On the other hand he will usually be agreeably surprised and not offer any criticism when the reverse is the case.

From a practical cost finding standpoint it therefore behooves you to err, if at all, on the side of conservatism so that your profits as determined monthly throughout the year will not be overstated when compared with the results determined on completion of the annual inventory. In this connection it may be well also to recommend for your consideration the growing practice of creating and carrying inventory reserves in anticipation of the inevitable inventory shortages.

Discussion

MR. NESBIT: I would like to have a little more about the practice of using reserve for inventory shortage. Just what is the best way for doing it?

MR. BONTHRON: What I had in mind, Mr. Nesbit, was this: Using the best knowledge we have from specification costs for determining cost of sales, when we come to the end of the year, we usually find that the physical inventory is not equal to the book inventory. Therefore, the practice that has been instituted in some concerns of setting aside an inventory reserve in a separate account, not disturbing the book inventory, but merely increasing the cost of sales by say, 1%, 1½%, ¾%, or some other relatively small amount, and crediting this to a separate account called inventory reserve, and then in setting up the balance sheet each month throughout the year, before the end of the year is reached this inventory reserve is just deducted from the inventory and the net figure only is shown. At the end of the year the acutal inventory shortage is determined by comparison of the physical inventory with the book inventory, based on the specification costs; but you always have the cushion of the inventory reserve to take care of any shortage and there usually is one.

MR FOY: You haven't mentioned anything about inter-company materials in inventory. We would like to hear something about that.

MR. BONTHRON: All right. Well, of course, in the case of a company having subsidiary or affiliated companies, but usually subsidiary companies, that is the simplest case, and we will deal with that. And where part of the inventory of the subsidiary company, or it may be of the parent company, has been manufactured by the other company and billed at an arbitrary price above cost, then in consolidation of the accounts it becomes necessary to reduce all materials to cost.

Let us say that "A" Company, a parent company, owns the stock of "B" Company, and the "A" Company makes or almost completes the manufacture of a certain part of the product of the "B" Company, and ships that product to the "B" Company at a price in excess of the manufactured cost to the "A" Company; and it comes time for the "B" Company to take inventory. It naturally takes inventory and determines its profits as a separate corporate entity on the basis of the cost to it of the material which it received, but when we come to consolidate the accounts of "B" with "A" we must reduce all material on hand unsold in the inventory of "B", produced by "A", to the cost of the "A" Company.

Employment Department Removed

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., January 7, 1929. The employment department for the manufacturing branch of the American Writing Paper Co., Inc., has been removed from the George R. Dickinson Division on Sargent street to the Wauregan Division on Dwight street. Entrance to the offices will be from the east side of the building.

COST SECTION

Buys Peyton Paper Co. of Duluth

DULUTH, Minn., January 7, 1929.—The Duluth Paper and Specialties Company, Duluth, which concern is owned and operated by the Adams Paper and Specialties Company, Waterloo, Iowa, has just completed negotiations for the purchase of the Peyton Paper Company of Duluth. There will be no change in the officers or directors of the Duluth Paper and Specialties Company for the present. These officers are as follows: F. D. Adams, president; A. H. Markkanen, vice-president; R. E. Van Doren, secretary and sales manager; R. H. Rouse, treasurer and credit manager.

The above officers together with Oluf Haugsrud constitutes the board of directors.

This transaction is effective as of January 2, 1929. It is planned to move the entire stock of merchandise of the Duluth Paper and Specialties Company from its present location at 18-20 W. Michigan street to the building now occupied by the Peyton Paper Company located at 222 W. Michigan street. The transaction also involves the purchase of the five story and basement warehouse formerly owned by the Peyton Paper Company.

The present salesforce of both houses consist of 24 men but after the consolidation is effected and some of the territory merged, the salesforce will probably be reduced to 18 or 20 which together with the sales organization of the Adams Corporation, Fort Dodge, Iowa, and the Adams Paper and Specialties Company, Waterloo, brings the total sales force to 34 men covering the entire northern half of Iowa, the northern half of Minnesota, northern Wisconsin and the upper peninsula of Michigan.

All departments will be continued and in addition to the lines of stationery, school supplies, fine papers and coarse papers, the company will continue to carry a stock of notions and specialties.

This firm will operate under the present name of the Duluth Paper and Specialties Company and will continue to work the same territory formerly covered by both houses. The Duluth Paper and Specialties Company was organized in February, 1924, and succeeded the Duluth Paper and Stationery Company.

Glassine Paper Co. Insures Help

Additional group life insurance has been offered to employees of the Glassine Paper Company, of West Conshohocken, Pa., who have been in the company's service for two years or more. Irrespective of length of service, an earlier contract, provided employees with life, health and non-occupational accident insurance.

The entire program is underwritten by the Metropolitan Life Insurance Company, featuring the co-operative method of paying premiums, by which the employer shares the cost with its employees.

Each subscribing employee with more than two years of service to his credit, receives an additional $1,000 of life insurance. Besides the death benefit established, the life insurance provides for the payment of a temporary income in the event of total and permanent disability. Should such incapacitation occur before age 60, an insured employee will receive the full amount of all his life insurance, with interest, in monthly installments.

Besides the actual protection provided, sick or injured employees are offered the advantages of a visiting nurse service.

Norwegian Paper Market Strong

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 31, 1928.—The demand for Norwegian papers has on the whole continued strong and most mills in the middle of October were reported as booked for several months ahead. The news print mills are well supplied with orders for delivery during the first half of 1929 and several large orders have been placed for delivery during the third and fourth quarters of the year. The market for thin printings continues firm, the mills being sold three or four months ahead. The same holds true of kraft and greaseproof papers. The demand for fine papers has also been brisk during the last few weeks although some difficulty is reported in maintaining prices.

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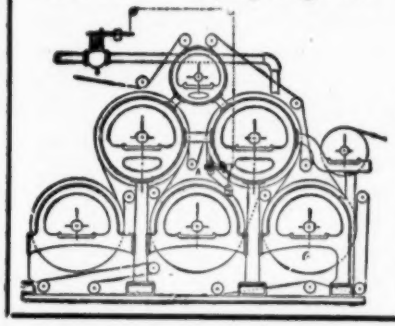

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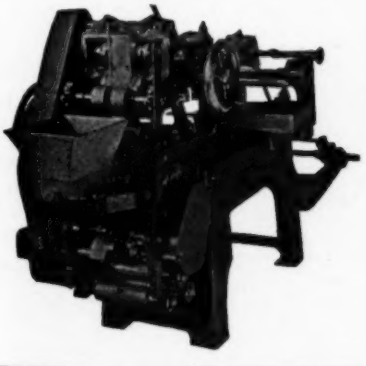

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Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JANUARY 5, 1929

SUMMARY

Cigarette paper .....40 cs.
Wall paper .....255 bls., 45 cs.
Paper hangings .....41 bls., 3 cs.
News print .....8,286 rolls
Printing paper .....56 rolls, 323 bls., 372 cs.
Wrapping paper .....49 bls., 37 cs.
Parchment paper .....2 cs.
Colored paper .....104 cs.
Decalcomania paper .....73 cs.
Drawing paper .....28 cs.
Transparent greaseproof paper .....57 cs.
Tissue paper .....78 cs.
Filter paper .....13 cs.
Baryta coated paper .....86 cs.
Surface coated paper .....149 cs.
Gold coated paper .....11 cs.
Envelopes .....74 cs.
Cards .....2 cs.
Bowl paper .....20 bls.
Stencil paper and ink .....90 cs.
Miscellaneous paper .....31 cs.

CIGARETTE PAPER

Standard Products Corp., France, Havre, 40 cs.

WALL PAPER

J. E. Bernard & Co., Berengaria, Southampton, 1 cs.
F. J. Emmerich, Thuringia, Hamburg, 4 bls.
Hudson F'd'g & Shipping Co., Thuringia, Hamburg, 1 cs.
Schmidt & Pritchard, Thuringia, Hamburg, 1 bls.
J. E. Bernard & Co., Thuringia, Hamburg, 97 bls., 1 cs.
W. H. S. Lloyd & Co., Resolute, Hamburg, 3 bls.
Globe Shipping Co., Resolute, Hamburg, 31 bls.
Phoenix Shipping Co., Resolute, Hamburg, 2 cs.
American Exchange Irving Trust Co., Resolute, Hamburg, 33 cs.
F. A. Binder, Dresden, Bremen, 51 bls.
G. J. Hunken, Dresden, Bremen, 2 bls.
W. H. S. Lloyd & Co., American Merchant, London, 3 bls.
F. J. Emmerich, Baltic, Liverpool, 21 bls., 7 cs.
A. C. Dodman, Jr., Inc., Pr. Roosevelt, Bremen, 35 bls.
F. J. Emmerich, Ausonia, London, 7 bls.

PAPER HANGINGS

Van Oppen & Co., Resolute, Hamburg, 4 bls.
W. H. S. Lloyd & Co., American Merchant, London, 2 bls., 1 cs.
A. C. Dodman, Jr., Inc., Baltic, Liverpool, 21 bls.
A. C. Dodman, Jr., Inc., France, Havre, 2 cs.
A. C. Dodman, Jr., Inc., Scythia, Liverpool, 14 bls.

NEWS PRINT

Bank of Montreal, Cornerbrook, Cornerbrook, 6,581 rolls.
A. S. Zabriskie, Dresden, Bremen, 90 rolls.
Parsons & Whittemore, Inc., Dresden, Bremen, 961 rolls.
Parsons & Whittemore, Inc., Thuringia, Hamburg, 267 rolls.
H. Reeve Angel & Co., Inc., Hjelmaren, Kotka, 387 rolls.

PRINTING PAPER

Walker Goulard Plehn Co., Inc., Dresden, Bremen, 215 cs.
National City Bank, Dresden, Bremen, 96 cs.
Gallagher & Ascher, Dresden, Bremen, 26 cs.
Perkins Goodwin & Co., Thuringia, Hamburg, 200 bls.
Keuffel & Esser Co., Thuringia, Hamburg, 56 rolls.
P. C. Zuhlke, Samland, Antwerp, 25 cs.
Hoboken Trust Co., Pr. Roosevelt, Bremen, 6 cs.
Globe Shipping Co., Pr. Roosevelt, Bremen, 2 cs.
J. I. Bernitz, Egypt Maru, Hamburg, 123 bls.
E. Burns, Berengaria, Southampton, 2 cs.

WRAPPING PAPER

Birn & Wachenheim, Samland, Antwerp, 20 cs.
F. C. Strype, Samland, Antwerp, 2 cs.
J. E. Barnard & Co., Samland, Antwerp, 31 bls.
Universal Car-Loading Co., Thuringia, Hamburg, 15 cs.
Walker Goulard Plehn Co., Inc., Egypt Maru, Hamburg, 18 bls.

PARCHMENT PAPER

Phoenix Shipping Co., Thuringia, Hamburg, 2 cs.

COLORED PAPER

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Markus Ward & Co., Dresden, Bremen, 31 cs.
J. J. Shore, Dresden, Bremen, 8 cs.
S. Gilbert, Dresden, Bremen, 22 cs.
S. Gilbert, Pr. Roosevelt, Bremen, 40 cs.

DECALCOMANIA PAPER

C. W. Sellers, Dresden, Bremen, 12 cs.
C. W. Sellers, Thuringia, Hamburg, 8 cs.
B. F. Drakenfeld & Co., Baltic, Liverpool, 25 cs. (duplex).
L. A. Consmiller, Pr. Roosevelt, Bremen, 28 cs.

DRAWING PAPER

H. Reeve Angel & Co., Inc., American Merchant, London, 5 cs.
Keuffel & Esser Co., Thuringia, Hamburg, 23 cs.

TRANSPARENT GREASEPROOF PAPER

Central Union Trust Co., Thuringia, Hamburg, 57 cs.

TISSUE PAPER

Dodwell & Co., Toba Maru, Kobe, 2 cs.
C. W. Sellers, American Merchant, London, 6 cs.
B. F. Drakenfeld & Co., Baltic, Liverpool, 1 cs.
J. E. Bernard & Co., Scythia, Liverpool, 1 cs.
F. B. Vandegrift & Co., Scythia, Liverpool, 10 cs.
Old Master Paper & Pulp Co., Thuringia, Hamburg, 58 cs.

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J. H. Schroeder Banking Corp., Dresden, Bremen, 51 cs.
Globe Shipping Co., Dresden, Bremen, 25 cs.

SURFACE COATED PAPER

Globe Shipping Co., Thuringia, Hamburg, 7 cs.
P. C. Zuhlke, Samland, Antwerp, 50 cs.
P. Puttman, Samland, Antwerp, 47 cs.
Gevaert Co. of America, Samland, Antwerp, 45 cs.

GOLD COATED PAPER

F. Murray Hill, Pr. Roosevelt, Bremen, 11 cs.

ENVELOPES

J. Beckhard, Dresden, Bremen, 71 cs.
H. Reeve Angel & Co., Inc., American Merchant, London, 3 cs.

CARDS

H. Reeve Angel & Co., Inc., American Merchant, London, 2 cs.

BOWL PAPER

Hurley Johnson Corp., Scythia, Liverpool, 20 bls.

STENCIL PAPER AND INK

Arlac Dry Stencil Co., Thuringia, Hamburg, 90 cs.

MISCELLANEOUS PAPER

Japan Paper Co., American Merchant, London, 3 cs.
Keller Dorian Paper Co., France, Havre, 28 cs.

RAGS, BAGGINGS, ETC.

Banco Com'l Italiane Trust Co., Rigel, Genoa, 130 bls. bagging.
Union Bank & Trust Co., Cabo Torres, Bilboa, 156 bls. rags.
American Rag Trading Co., Cabo Torres, Bilboa, 122 bls. rags.
Darmstadt Scott & Courtney, West Arrow, Antwerp, 45 bls. rags.
E. J. Keller Co., Inc., West Arrow, ——, 213 bls. flax waste.
E. J. Keller Co., Inc., Anaconda, ——, 54 bls. rags.
W. Loewenthal & Co., Anaconda, Rotterdam, 4 bls. rags.
C. Belsky, Anaconda, Rotterdam, 63 bls. rags.
Bank of The United States, Anaconda, Rotterdam, 38 bls. rags.
Green Hamilton & Co., Anaconda, Rotterdam, 153 bls. cotton waste.
Darmstadt Scott & Courtney, Pipestone County, Dunkirk, 100 bls. rags.
Castle & Overton, Inc., Pipestone County, Havre, 62 bls. rags.
Brown Bros. & Co., Pipestone County, Havre, 27 bls. rags.
B. D. Kaplan, Pipestone County, Havre, 63 bls. rags.
American Express Co., Pipestone County, Havre, 29 bls. rags.
W. Steck & Co., Pipestone County, Havre, 152 bls. jute waste.
E. J. Keller Co., Inc., Pipestone County, ——, 62 bls. rags.
S. Shapira & Sons, Toba Maru, Yokohama, 40 bls. rags.
Interstate Trust Co., Dresden, Bremen, 96 bls. rags; 71 bls. bagging.
Manufacturers Trust Co., Dresden, Bremen, 12 bls. rags.
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J. Cohen & Son, Inc., Scythia, Liverpool, 49 bls. rags.
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Manufacturers Trust Co., Scythia, Liverpool, 12 bls. rags.
Castle & Overton, Inc., London Exchange, Dundee, 108 bls. rags.
Anglo South American Trust Co., London Exchange, Dundee, 321 bls. rags.
Brown Bros. & Co., London Exchange, Dundee, 66 bls. rags.
Whaling Waste Products Co., London Exchange, Dundee, 158 bls. rags.
E. J. Keller Co., Inc., London Exchange, ——, 113 bls. linen threads.
Amsinck Sonne & Co., Inc., Thuringia, Hamburg, 29 bls. rags.
Guaranty Trust Co., Thuringia, Hamburg, 63 bls. cottons.
A. W. Fenton, Inc., Pr. Roosevelt, Bremen, 29 bls. rags.
Salomon Bros. & Co., Pr. Roosevelt, Bremen, 52 bls. rags.
A. W. Fenton, Inc., Egypt Maru, Hamburg, 7 bls. rags.
M. Lobsitz, Egypt Maru, Hamburg, 19 bls. rags.
Royal Manufacturing Co., Egypt Maru, Hamburg, 70 bls. cotton waste.
E. J. Keller Co., Inc., Lepanto, ——, 208 bls. flax waste.
E. J. Keller Co., Inc., Half Moon, ——, 117 bls. rags.
E. J. Keller Co., Inc., Mercier, ——, 58 bls. rags.
E. J. Keller Co., Inc., Hellen, ——, 141 bls. rags.
Castle & Overton, Inc., Oscar II, Denmark, 34 bls. rags.
Castle & Overton, Inc., Sacandaga, Rotterdam, 1 ble. rags.

OLD ROPE

N. E. Berzen, Rigel, Marseilles, 47 coils.
Brown Bros. & Co., Cabo Torres, Pasages, 136 rolls.
W. Steck & Co., Anaconda, Rotterdam, 141 bls.
Brown Bros. & Co., Samland, Antwerp, 68 coils.

CASEIN

Brown Bros. & Co., Southern Cross, B. Ayres, 417 bags.
Atterbury Bros., Inc., Southern Cross, B. Ayres, 834 bags.
American British Chemical Supply Co., Southern Cross, B. Ayres, 834 bags.
Kalbfleisch Corp., Southern Cross, B. Ayres, 250 bags.

WOOD PULP

J. Andersen & Co., Aggersund, Stugsund, 125 bls. sulphite, 25 tons.
E. M. Sergeant & Co., Aggersund, Hernosand, 3,300 bls. sulphate, 550 tons.
J. Andersen & Co., Aggersund, Hernosand, 1,800 bls. sulphate, 360 tons; 3,450 bls. sulphite, 575 tons.
Price & Pierce, Ltd., Aggersund, Stugsund, 600 bls. sulphite, 100 tons.
Pagel Horton & Co., Inc., Aggersund, Gefle, 1,750 bls. wood pulp, 355 tons.
Bulkley Dunton & Co., Aggersund, ——, 8,675 bls. wood pulp, 1,835 tons.
M. Gottesman & Co., Inc., Korsholm, Stockholm, 600 bls. sulphite.
Scandinavian Pulp Agency, Inc., Korsholm, Skutskar, 7,540 bls. wood pulp.
Castle & Overton, Inc., Korsholm, Sundsvall, 150 bls. sulphite.
Johanson Wales & Sparre, Inc., Korsholm, Sundsvall, 750 bls. sulphite.
Scandinavian Pulp Agency, Inc., Korsholm, Wifstavarf, 5,000 bls. sulphate; 3,750 bls. sulphite.
M. Gottesman & Co., Inc., Korsholm, Soraker, 450 bls. sulphite.
Johanson Wales & Sparre, Inc., Korsholm, Soraker, 1,800 bls. sulphite.
Bulkley Dunton & Co., Korsholm, ——, 2,500 bls. wood pulp.
Castle & Overton, Inc., Thuringia, Hamburg, 534 bls. wood pulp, 80 tons.
E. J. Keller Co., Inc., Thuringia, ——, 502 bls. wood pulp, 75 tons.
E. J. Keller Co., Inc., New York, ——, 648 bls. wood pulp.
E. J. Keller Co., Inc., Natirar, ——, 475 bls. wood pulp.

(*Continued on page 64*)

For reliable running and average long life

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are unsurpassed

We make them for the largest and fastest machines.

Cylinder Wires All Sizes

The Lindsay Wire Weaving Co.

Collinwood Sta. CLEVELAND, OHIO

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FIBRE CONTAINERS

Our Paris Black Extra, made expressly for the paper industry, is now available in solid Fibre Containers, holding—four—12½ lb. Paper Bags. This represents 25% freight saving and convenience in storing and handling.

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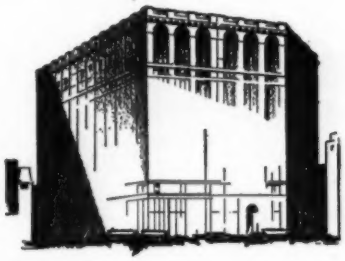

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From every section of America, and from foreign countries, buyers come to the Fifth Avenue Building. Because in this building, on one buying trip, they can fill the greater part of their seasonal requirements. The offices and display rooms of leading manufacturers are to be found here. Men's wear, women's wear, fabrics, gloves, gifts, toys, novelties, pottery, paper and kindred lines are represented.

The Fifth Avenue Building is accessible from any part of the city. Buses and surface cars pass the door. Two elevated lines are nearby. It is ten minutes by subway from the Pennsylvania Station, thirteen from Grand Central. It is a few minutes from the shopping district in one direction, from the financial district in another.

THE FIFTH AVENUE BUILDING

Broadway and Fifth Avenue, at Madison Square, New York

"More than an office building"

Imports of Paper and Paper Stock

(*Continued from page 62*)

BALTIMORE IMPORTS

WEEK ENDING JANUARY 5, 1929

Baltimore Post, Cornerbrook, Cornerbrook, 1,367 rolls news print.
Washington Star, Cornerbrook, Cornerbrook, 1,809 rolls news print.
Washington News, Cornerbrook, Cornerbrook, 1,575 rolls news print.
F. J. Couse, West Arrow, Antwerp, 45 bls. rags.
Congoleum Nairn Co., West Arrow, Antwerp, 1,144 bls. rags; 339 bls. bagging.
S. Shapira & Son, West Arrow, Antwerp, 5 bls. rags.
Katzenstein & Keene, Inc., West Arrow, Antwerp, 33 bls. old manila nets.
E. J. Keller Co., Inc., Burgerdyk, ——, 600 bls. wood pulp.
Castle & Overton, Inc., Ontario, France, 105 bls. rags.
Castle & Overton, Inc., Schwarzwald, Germany, 6,023 bls. wood pulp.
Castle & Overton, Inc., Bilderdyk, Holland, 170 bls. wood pulp.
Castle & Overton, Inc., Collamer, France, 192 bls. rags.

NORFOLK IMPORTS

WEEK ENDING JANUARY 5, 1929

Castle & Overton, Inc., West Arrow, Antwerp, 42 bls. rags.
Castle & Overton, Inc., Schwarzwald, Germany, 574 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING JANUARY 5, 1929

Bank of The Manhattan Co., Pipestone County, Dunkirk, 193 bls. rags.
Brown Bros. & Co., Pipestone County, Havre, 59 bls. old rope.
American Exchange Irving Trust Co., Pipestone County, Havre, 218 bls. old rope; 310 bls. rags.
Castle & Overton, Inc., Pipestone County, Havre, 200 bls. rags.
Hollingsworth & Vose Co., Pipestone County, Havre, 49 bls. bagging.
W. Schall & Co., Pipestone County, Havre, 306 bls. bagging.
P. H. Graham, Pipestone County, Havre, 27 bls. rags.
Bord & Son, Pipestone County, Havre, 215 bls. rags.
Burmon & Bolonsky, Pipestone County, Havre, 21 bls. rags.
E. J. Keller Co., Inc., Pipestone County, ——, 66 bls. rags.
E. J. Keller Co., Inc., Hagen, ——, 90 Bls. rags.
Castle & Overton, Inc., Lisbon Maru, Osaka, 120 bls. rags.
Castle & Overton, Inc., Ammon, Hamburg, 1,269 bls. wood pulp.
Castle & Overton, Inc., Ambridge, Germany, 229 bls. rags; 1,242 bls. wood pulp.
Castle & Overton, Inc., Ambridge, Holland, 52 bls. rags.
Castle & Overton, Inc., Numidia, Germany, 133 bls. rags.
Castle & Overton, Inc., Hagen, Germany, 1,928 bls. wood pulp.
Castle & Overton, Inc., Norfolk Maru, Japan, 350 bls. rags.
Castle & Overton, Inc., Bilderdyk, Germany, 1,066 bls. wood pulp.
Castle & Overton, Inc., Saco, Belgium, 89 bls. rags.

NEWPORT NEWS IMPORTS.

WEEK ENDING JANUARY 5, 1929

Castle & Overton, Inc., Bilderdyk, Holland, 1,060 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING JANUARY 5, 1929

Castle & Overton, Inc., Cardonia, Spain, 163 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING JANUARY 5, 1929

Brown Bros. & Co., London Exchange, Dundee, 47 bls. paper stock.
Brown Bros. & Co., Hjelmaren, Stockholm, 200 bls. wood pulp.
Castle & Overton, Inc., Liberty, Havre, 20 bls. rags.
Castle & Overton, Inc., Exeter City, Bristol, 181 bls. rags.
Castle & Overton, Inc., Burgerdyk, Rotterdam, 683 bls. rags.
Castle & Overton, Inc., Exchange, Spain, 252 bls. rags.
Castle & Overton, Inc., Ena de Larrinaga, Germany, 1 cs. wire.
Castle & Overton, Inc., London Shipper, England, 293 bls. rags.
Castle & Overton, Inc., Hannover, Germany, 86 bls. rags.
Castle & Overton, Inc., Ontario, France, 324 bls. rags.
Castle & Overton, Inc., Natirar, Germany, 118 bls. rags, 4 cs. wires.
Castle & Overton, Inc., Schwarzwald, Germany, 3,410 bls. wood pulp.
Castle & Overton, Inc., Tagliamento, Italy, 1 ble. rags.
Castle & Overton, Inc., Saco, Belgium, 210 bls. rags.
Castle & Overton, Inc., Ambridge, Holland, 424 bls. rags.
Castle & Overton, Inc., Bilderdyk, Holland, 510 bls. wood pulp.
Castle & Overton, Inc., Sarcoxie, France, 600 bls. rags.
Castle & Overton, Inc., Quaker City, England, 78 bls. rags.
Castle & Overton, Inc., ——, Greece, 415 bls. rags.
Castle & Overton, Inc., West Selene, South America, 223 bls. rags.
E. J. Keller Co., Inc., Ena da Larrinaga, ——, 115 bls. rags.
E. J. Keller Co., Inc., Ontario, ——, 45 bls. rags.
E. J. Keller Co., Inc., Hannover, ——, 112 bls. rags.
E. J. Keller Co., Inc., Pipestone County, ——, 62 bls. rags.
E. J. Keller Co., Inc., Ambridge, ——, 58 bls. rags.

Fire From Over-Heated Coal

[FROM OUR REGULAR CORRESPONDENT]

POTSDAM, N. Y., January 7, 1929.—The plant of the Racquette River Paper Company, of Unionville had a narrow escape from serious damage last week when it was discovered that the coal in one of the large bins had become over-heated and was ready to burst into flames. The condition in the bin was only discovered through the opening of an automatic hopper to admit coal for one of the boilers. As the coal was forced down the chute it was seen to be in a red-hot condition and as it struck the floor of the boiler room it ignited the coal dust accumulated there with the result that the firemen had to make a hasty retreat. An alarm was immediately rung in which brought out the local fire department. Little damage was done to the plant though the firm suffered some loss resulting from the shutting down of the machines for some time following the disturbance.

Government Award on Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D C., January 9, 1929.—The Cauthorne Paper Company has been awarded the contract for furnishing the Government Printing Office with 4,800 sheets (2,000 pounds) of 26 x 38—50., news board at 2.4 cents per pound, bids for which were received on November 30.

Independent Paper Mills In Receivers' Hands

Percy J. Michelbacher and Sol. Katzenstein were appointed receivers for the Independent Paper Mills, Inc., manufacturers of paper napkins, 475 Fifth avenue, under a bond of $25,000, last week by Judge Coleman in the U. S. District Court, in an equity action instituted by Alfred B. Nathan and S. Howard Imbrey, representing Milton Fleischer, a creditor for $32,900.

The corporation owns and operates mills located at Plattsburg, N. Y., and its liabilities are estimated at $413,489 and the assets are valued at $585,000, exclusive of patent rights, good will, etc., carried on the books at $474,847.

The company, it is stated, has been losing money recently and consented to the receivership.

William Mann Co. Sales Convention

Members of the sales staff of the William Mann Company, manufacturers of banking and corporation stationery and large consumers of paper products, with headquarters at 925 Market street, met in annual sales convention here last week at the Public Ledger Club, Fifth and Chestnut streets. There were 34 associates of the sales staff present from the Eastern States who enjoyed the banquet business sessions and dinner at the Union League. William M. Prizer, president of the company, presided at the meetings.

One piece--No folds

PAPRUS DISHES are *moulded* in one piece from fresh pulp—without folds, without staples. They are rigid as wood. Yet they cost less than other dishes!

These are talking points that help your salesmen get orders. You can increase your business with Paprus Dishes. Write for prices.

Paprus Dishes used as covered container

PAPRUS DISHES

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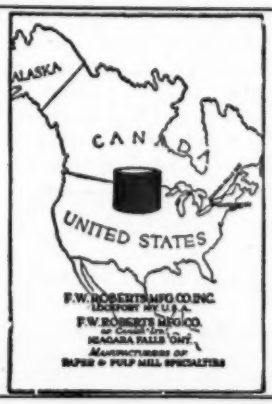
Factory: Waterville, Maine
JOHN M. HART COMPANY, INC., *Manager of Sales*

Paper and Pulp Mill engineers thruout the country have proven that it "pays to analyze." The analysis of raw materials and the finished product permits buying and selling on definite specifications with a consequent saving to you.

We particularly specialize in the
Analysis of paper mill materials.
Analysis of paper of all kinds.
Solving problems of paper manufacture.
Development of mill control tests.
An opportunity to demonstrate the value of our service to your organization is requested.

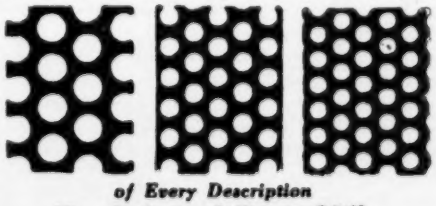
New England Laboratories
PULP AND PAPER DIVISION
(FORMERLY THE EMERSON LABORATORY)
SPECIALISTS IN THE PAPER FIELD
121 CHESTNUT STREET, SPRINGFIELD, MASSACHUSETTS

BURRS



BURRS

PERFORATED METALS



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Power plants—additions—complete paper mill projects

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A. P. W. Paper Co.
Mead Pulp and Paper Co.
Chillicothe Paper Co.
Warren Mfg. Co.
Spencer-Wynne Paper Products Company
Bennington Wax Paper Company
Oswego Falls Corp.
Fairfield Paper Co.

THE H. K. FERGUSON COMPANY
Hanna Bldg. • Cleveland, Ohio • Phone: Cherry 6275
New York • Detroit • Birmingham • Tokio, Jap—

Ferguson
ENGINEERS

Paper Mill Stocks and Bonds

Quoted by Taylor & White, 45 Wall street, New York City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	ASKED
Abitibi Power & Paper 5s, 1943	90	91
Abitibi Power & Paper 6s, serially to 1934	100	102
American Writing Paper 6s, 1947	81	87
Bastrop Pulp & Paper 6½s, 1940	103	105½
Bedford Pulp & Paper 6½s, 1942	97	100
Belgo-Canadian Paper 6s, 1943	100	103
British-Columbia Pulp & Paper 6s, 1950	89	92
Brown Paper Mills Serial 6s, 1941	97	100
Brown Company 5½s, 1946	98	101
Bryant Paper 6s, 1942	98	101½
Canadian Paper Board 7s, 19337	97	99½
Cape Breton Pulp & Paper 6s, 1932	103	...
Celotex Company 6s, 1929	95	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago, Debenture 6s, 1936	95	98
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	78	...
Champion Coated Paper Serial 6½s, 1934	100	...
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	95	...
Champion Paper Corp. 6s, 1945	95	98
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	90	99
Cornell Wood Products 7½s, 1937	103	...
Crown Willamette 6s, 1951	101	102
Della Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	80	...
Donnaconna Paper 5½s, 1948	93	...
Eastern Manufacturing Co. 7s, 1938	97	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Irange Paper 7s, 1942	101	...
Fort William Paper 6s, 1946	100	104
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	100	...
Hawley Pulp & Lumber 6s, 1946	96	...
Hawthorne Paper Company 6s, 1937	80	...
Heberg Paper & Fibre 7s, 1937	94	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
Itasca Paper & Prairie River Power Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Power Serial 6s, 1938	99	...
Jessup & Moore First 6s, 1945	83	90
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Paper 6s, 1941	105	108
Marathon Paper Mills Serial 5½s, 1942	99	101
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	97	101
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper Serial 6½s, 1947	102	105
Munissing Paper Serial 6s, 1936	98	...
Nekoosa Edwards Paper 6s, 1928-42	96	...
Ontario Pulp & Paper 6s, 1931	108½	110½
Orono Pulp & Paper 6s, 1943	99	...
Orono Pulp & Paper 5s, 1941	96½	...
Oswego Falls Corp. 6s, 1941	99	102
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 5½s, 1947	98	100
Price Brothers 6s, 1943	105	...
Provincial Paper 5½s, 1947	98½	...
Queen City Paper 7s, 1933	98	...
River Raisin Paper 6s, 1936	98	100
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Croix Paper Serial 5s, 1937	99	...
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Maurice Valley Corp. 6s, 1945	101	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s,, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	102
Smith (Howard) Paper Mills 7s, 1941	104	106
Spanish River Pulp & Paper 6s, 1931	108	110
Stevens-Thompson Paper 6s, 1942	94	96
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1934	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	...
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	...
Tomahawk Pulp Paper 7s, 1932	99	...
Tonawanda Paper 5½s, Series 1941	99	102
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	102	...
Waterway Paper Products 6s, 1931	100	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parson Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¼	10¼
American Box Board, Com.	9¼	10¼
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P. Pfd.	65	73
Brompton Pulp & Paper, 8% Pfd.	100	...
Champion Fibre, 7% Pfd.	108	110
Diem & Wing, 7% Pfd.	92	97
Eastern Mfg. Co. 1st Pfd.	55	...
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	100	...
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off.
Holyoke Card & Paper	160	None Off.
Marathon Paper Mills, Com.	150	...
Mengel Co., Pfd.	102	104
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	93	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers, Com.	195	...
Oxford Paper Co., Pfd.	108	111
Penobscot Chemical Fibre, Com.	80	...
Richardson Co., Com.	170	...
Sabin Robbins Paper Co., 8% Pfd.	105	110
St. Croix Paper	155	...
St. Regis Paper Co., 7% Cum. Pfd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None Off
West Virginia Pulp and Paper Company	55	57
West Virginia Pulp and Paper, Pfd.	100	103
Whittaker Paper, 7% Cum. Pfd.	105	None Off

New York Mills Have Good Year

CARTHAGE, N. Y., December 27, 1928.—A survey of paper manufacturing industries of this district just completed shows that the past year has been a banner one for all branches of the trade and indications at present are that similar conditions will prevail during the ensuing year. Virtually all factories have enjoyed a good year and workers have had steady employment throughout the entire year. At Watertown the Bagley and Sewell Company, one of the city's largest industries, has completed several of the largest paper machines ever constructed and orders are on hand for more machines which will keep the plant running on full time in all departments for some time to come. The firm furnishes steady employment to several hundred hands.

Much has been accomplished during the past year in the way of freight rate reductions for Northern New York industries and credit is due mainly to Joseph A. Quinlan, traffic manager of the St. Regis Paper Company and its subsidiaries. These freight rate reductions have meant much to the industries of this district and favorable decisions in several later cases which are of interest to the paper and other industries are expected during 1929. The Continental Paper Company and Hinde & Dauche Company report good business conditions and freight rate reductions are expected greatly to aid them in competing with firms in more centrally located sections of the country. Both firms are now employing the largest numbers of workers in their history due mainly to the heavy demand for their manufactured products.

Reports from Knowlton Brothers, Inc., and the Coty Bag Corporation, of Watertown, show similar conditions prevailing with both firms handling more business than at this time a year ago. Knowlton Brothers have experienced a prosperous year and there is every indication of increased business during 1929. The Coty Bag Corporation, a newly organized concern, plans to take over a new plant this month and is now busy making it ready for operation. The new plant will be operated in conjunction with the main mill and is a further step in expansion of the firm's growing business. It is reported that the firm has many orders to be filled.

Gets Permission to Do Business in Ohio

DAYTON, Ohio, January 7, 1929.—Permission to do business in Ohio has just been granted to the International Envelope Corporation, of New York, chartered under the laws of the state of Delaware, upon payment to Secretary of State C. J. Brown, of a fee of $2135.67.

Howard Marston has been designated by the concern to represent it in this city, at the plant, located at Second and Front streets, in the manufacture of envelopes and wrappers under United States postoffice department contract.

Mr. Marston, manager of the Mercantile Corporation, which had the Government contract in Dayton for many years, stated today the manufacture of stamped envelopes and wrappers would continue in Dayton as heretofore, with no other change than that of the name, which will be that of the International Envelope Corporation.

Operation under the new contract started January 1. Retention of the plant in this city is a matter of great importance to Dayton and the Miami Valley as it insures the employment of hundreds of men and women and will result in the distribution of a large payrool.

For a time it was thought the plant would be removed to Cleveland, or possibly New York.

Gets more heat from a pound of coal than any other combustion system
Capacities up to 700,000 pounds of steam per hour

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Manufacturers of

SUPERCALENDERED and MACHINE FINISHED BOOK and LITHOGRAPHIC PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

also

Bleached Spruce Sulphite and Soda, Kraft Pulp

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122 East 7th St., Los Angeles, Cal.
Sixth and Chestnut Sts., Philadelphia, Pa.

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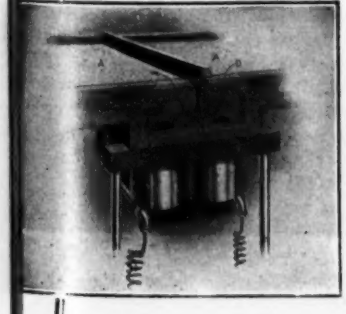
NEW YORK



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THE ROLAND T. OAKES CO.

Electrical Specialists Holyoke, Mass. *Established 1885*

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, January 9, 1929.

With most of the paper mills devoting their attention to inventories, the local paper market was only moderately active during the past week. Prices are somewhat easier on some of the standard grades. Sales forces of the leading paper houses are entering upon the 1929 campaign with enthusiasm and a feeling of optimism prevails.

Conditions in the news print market are practically unchanged. The leading executives have resumed the conferences which were started some six weeks ago and it is reported that most of the manufacturers favor $55 per ton as the contract price on standard rolls for the current year. The production limit has practically been agreed upon.

There are signs of improvement in the near future in the box board market, and firmer prices for hip and news are anticipated shortly. The fine paper market is rather quiet at present but more lively trading is expected following the inventory period. The coarse paper market is in a fairly satisfactory position and wrapping paper is moving at a normal pace.

Mechanical Pulp

Demand for ground wood was light during the past week. Most of the business transacted was along routine lines. Inquiries for future business are fairly numerous and the future outlook is encouraging. Prices generally remain steady and unchanged and there is not much talk of concessions around.

Chemical Pulp

No radical changes were recorded in the chemical pulp market during the past week. Considering the time of the year, a fair amount of contract business is being booked at the prevailing quotations. Both foreign and domestic producers are reported to be well sold ahead on some grades and offerings are by no means too generous.

Old Rope and Bagging

Mill demand for the various grades of old rope is moderate. Supplies of imported and domestic manila rope, however, are moving into consumption in seasonal volume. The bagging market is not attracting much attention from the mills at the present time. The roofing grades, however, are in fair request. Prices remain unchanged in most instances.

Rags

The domestic rag market continues quiet, although cotton cuttings are still moving in fair volume. Not much improvement is anticipated until the inventory period is over. Prices remain unaltered. Little change has transpired in the foreign rag market and dealers are still complaining of the high prices being asked abroad.

Waste Paper

Although book paper is still in a strong position, due to scarcity of offerings and persistent demand from the mills, the trend of the paper stock market is easier. Old kraft machine compressed bales are now quoted at from 1.75 to 1.85 while No. 1 white news is offered at from 1.70 to 1.75. No. 1 soft white shavings are selling at from 2.50 to 2.60.

Twine

Most of the business transacted in the local twine market during the past week consisted of small orders for immediate requirements. Some dealers are anticipating a revival of activities in the near future, now that the holidays are over and the inventory season is passing. Prices remain unaltered, in most instances.

Makes Cardboard Strong as Iron

A dispatch from London to the *New York Tribune* says that what is called "the most important metallurgical process since the discovery of steel" is announced in an advertisement by the Einstein Electro-Chemical Process, Ltd., published in the newspapers here recently.

Materials which are non-conductors of electricity can now be electroplated, according to the claim made by this company, which asserts that wood, silk, porcelain, paper and all metals can henceforth be coated with a surface of non-corrosive metal. As a result of the treatment even such flimsy materials as cardboard or plywood can be given the strength of iron and made resistive to the corrosive action of steam, heat, chemical fumes and water, it is declared.

Fortification of the frail fabric of airplanes and airships to the strength of steel, and solution of the boat-builder's problem by entirely metalizing craft of every description, are among the claims made for the new invention. Woodwork and textiles can be similarly metallized, it is asserted.

The advertisement asserts that the British Admiralty and Air Service have ordered articles on whicch the electro-chemical process has been successfully used.

Reduced Fares to Annual Conventions

Round trip railroad tickets to New York City to attend the annual meetings of the American Paper and Pulp Association, the National Paper Trade Association and affiliated organizations during the week of February 18 may be purchased at reduced rates.

A new form of certificate is being used this year which does not require ticket validation at New York. Each certificate permits the purchase of a five-day return limit ticket at the rate of one fare and a half or a thirty day return limit ticket at one fare and three-fifths.

Water Power Survey

In a water power survey conducted recently in Wisconsin it was found that there are 25 super-dams or reservoirs which regulate the flow of water to the power dams. It is through these that the problem of high and low water seasons is solved. The system has been worked out so extensively and accurately that a uniform water supply for turning the wheels of the paper mills is assured all through the year. One of these controls the water supply of a large portion of the lakes in the wooded northern Wisconsin country, not only providing a supply in mid-summer but preventing floods in the spring or other periods of high water.

Groveton Paper Co. Opens New York Office

The Groveton Paper Company, of Groveton, N. H., which has just started to handle its lines direct, established New York offices during the week, in room 2843, the Salmon Tower Building, 11 West 42nd street, New York. The telephone of the new offices will be announced later.

THE
"TRIMBEY-SHEVLIN"
A NEW PULP—

Screens 80 to 100 Tons Ground Wood per Day
Consistency—Screened Stock 0.8% to 1% Air-Dry
Requires only 25 to 30 Horse Power
Employs Only One-Half Usual Number of Deckers
Entirely Self-Cleaning
No Showers, No Thinning Water, No Wash Water.

A Pulp Screen Which is a Worthy Companion to The Trimbey Automatic Consistency Regulator and The Trimbey and Tibbitts Proportioning and Metering System

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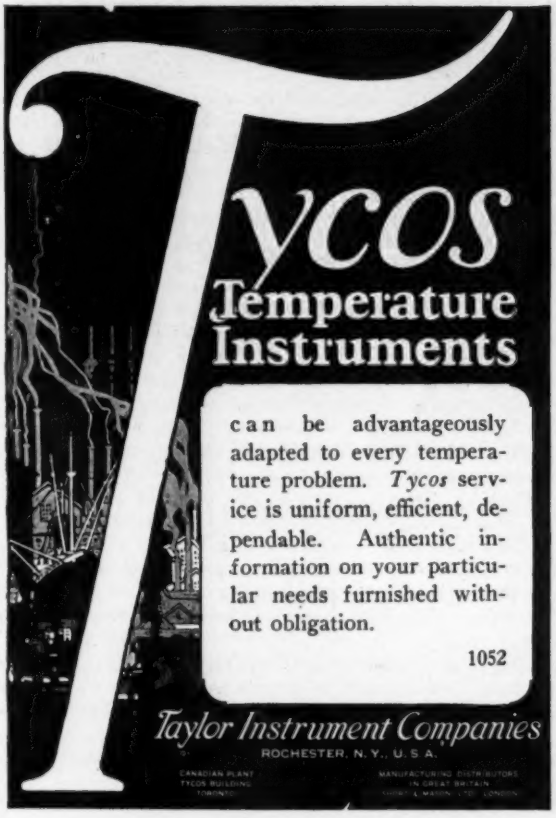
Glens Falls, N. Y.

Made in Canada? Yes.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ROCHESTER, N.Y., U.S.A.

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The Paper Trade Journal publishes the happenings of interest in the Pulp and Paper Industry—Covers it completely is saying it a little clearer.

To reach buyers in this field, advertising in these columns can carry your message to many that are interested in your products.

As a member of the Audit Bureau of Circulations our circulation claims are not only authentic but provable.

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10 East 39th St. New York

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Ample Reserves
Prompt Deliveries
Purity 99½%

TEXAS GULF SULPHUR CO.
41 E. 42nd Street New York City
Mine Gulf, Matagorda County, Texas

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, January 9, 1929.

BLANC FIXE.—The position of the blanc fixe market is practically unchanged. Both the pulp and the powder are in fair request for the season. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—Steadiness prevails in the bleaching powder market. Supplies are moving into consumption in normal volume. Prices are holding to schedule and there is little talk of concessions around. Bleaching powder is quoted at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Offerings of casein are fairly liberal. Demand has been rather light and the market is slightly easier. Domestic casein is now quoted at from 14¾ cents to 15¾ cents per pound, while imported casein is selling at from 15¼ cents to 15¾ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—The caustic soda market is exhibiting a strong undertone and an excellent volume of contract business has been booked for 1929. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—While the china clay market was rather quiet, prices on both the imported and domestic product are holding to schedule without difficulty. Imported china clay is quoted at from $15 to $25 per ton, ship side. Domestic paper making clay is selling at from $8.00 to $13.00 per ton, at mine.

CHLORINE.—Trading in the chlorine market was active during the past week. Shipments against contract are going forward at a good pace. Chlorine is still quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on contract orders. The spot quotation ranges from 3¼ cents to 3½ cents per pound.

ROSIN.—Some improvement was noticed in the rosin market. At the naval stores, the grades of gum rosin used in the paper mills are now quoted at from $9.30 to $9.45 per 280 pounds, ex dock, in barrels. Wood rosin is selling at from $7.20 to $8.00 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Demand for sale cake continues active and the market is in a sound position. Prices are holding up to schedule and shading is infrequent. Salt cake is quoted at from $16 to $18 per ton, while chrome salt cake is still selling at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—Contract shipments of soda ash are being maintained in satisfactory volume. The bulk of the contract business for the current year has been booked, according to reports. Contract quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—Keen competition in the starch market has led to a decline in quotations, despite the upward tendency of the grain market. The prevailing demand is normal. Special paper making starch is now quoted at $3.67 per 100 pounds, in bags, and at $3.84 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—The sulphate of alumina market was moderately active. Supplies of this product are moving into consumption in routine manner. Commercial grades of sulphate of alumina are still quoted at from $1.40 to $1.45 and iron free at from $1.90 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Conditions in the sulphur market are unchanged. Sulphur is still quoted at $18 per ton, at mine, in lots of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and near by car loads the quotation is $21 per ton.

TALC.—No changes of moment have been recorded in the talc market for some time. Contract shipments are well up to average. Prices remain unaltered. Domestic talc is quoted at from $16 to $18 per ton, at eastern mines, while imported talc is selling at from $18 to $20 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
News—		
Rolls, contract	Nominal	
Rolls, transient	Nominal	
Sheets	Nominal	
Side Runs	Nominal	
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	4.00	@ 4.25
Southern	3.75	@ 4.00
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

Boards—per ton—		
News	32.50	@45.00
Straw	52.50	@55.00
Chip	30.00	@42.50
Binders' Boards	65.00	@67.50
Sgl. Mla. Ll. Chip	45.00	@52.50
Wood Pulp	80.00	@85.00
Container	52.50	@55.00
85 Test Jute Liner	52.50	@55.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@31.25
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@29.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.65	@ 4.40
Easy Bleaching	2.75	@ 2.90
No. 1 strong unbleached	2.50	@ 2.80
Mitscherlich unbleached	2.55	@ 3.25
No. 2 strong unbleached	2.40	@ 2.50
No. 1 Kraft	2.50	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	3.75	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.50
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.50	@ 3.30
Soda Bleached	3.15	@ 3.30
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.50	@ 1.65

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.50	@11.00
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	6.75	@ 7.25
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.15	@ 2.30
French Blue Linens	2.65	@ 2.75
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.10	@ 2.20
Checks and Blues	1.75	@ 1.90
Lindsay Garments	1.80	@ 1.85
Dark Cottons	1.60	@ 1.65
Old Shopperies	1.50	@ 1.55
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.60	@ 1.70
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, heavy	1.60	@ 1.65
Bright Bagging	1.60	@ 1.65
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	3.35	@ 3.65
Domestic	3.25	@ 4.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.50	@ 2.60
White envelope cuttings	3.25	@ 3.50
Flat Stock—		
Stitchless	1.70	@ 1.80
Overissue Mag.	1.70	@ 1.80
Solid Flat Book	1.65	@ 1.75
Crumpled No. 1	1.15	@ 1.25
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.70	@ 1.80
New B. B. Chips	.65	@ .75
New Env. Cut	2.40	@ 2.60
Manilas—		
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.75	@ .80
Container	.60	@ .65
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.75	@ 1.85
News—		
No. 1 White News	1.70	@ 1.75
Strictly Overissue	85	@ .90
Strictly Folded	.60	@ .65
No. 1 Mixed Paper	.45	@ .50
Common Paper	.30	@ .35

Clay

400 tons daily

AMERICAN MADE FOR AMERICAN TRADE

AT LAST!!

"An American Coating Clay"

H. T. Brand Coating Clay, Highest Grade Filler Clay, being used in some of the largest paper mills in the country. Send for samples and article on "*An American Coating Clay.*" Forty-three years experience in American washed clays are back of this product.

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GIANT

RAGS — BURLAP
BAGGING — ROPE

JUTE BUTTS, MAGAZINES, CATALOGS OLD PAPERS, THREAD WASTE AND ALL GRADES OF RAGS CUT QUICKLY AND EFFICIENTLY WITH THE

TAYLOR, STILES & COMPANY GIANT RIEGELSVILLE, N.J. U.S.A.

This is the GIANT 2A CUTTER WITH A CAPACITY OF 3000 lbs. PER HOUR
GIANT RAG CUTTERS HAVE CAPACITIES OF FROM 1 to 5 tons per hour.

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SOLE AGENTS FOR EUROPE
R. J. Marx, 133-139 Finsbury Pavement, London, E. C.

Twines

(F. o. b. Mill)

No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Ameri Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¼
No. 1 Manila	.04¼	@	.05¼
No. 1 Fibre	.04¾	@	.05½
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
(Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.80	@	2.95
White Env. Cuttings	2.90	@	3.00
No. 1 Soft Shavings	2.50	@	2.60
No. 1 Mixed	1.00	@	1.05
No. 2 Mixed	.90	@	1.00
Ledger & Writings	1.55	@	1.65
Solid Books	1.25	@	1.35
Blanks	1.70	@	1.80
Krafts	1.90	@	2.05
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.90	@	1.00
Folded News (overissue)	.65	@	.75
Old Newspapers—			
No. 1	.65	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.80
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.10	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	.20	@	.22
Fine	.18	@	.26½
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.10	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
News	.03½	@	.04
No. 1 Jute Manila	.08½	@	.09
Manila Sul., No. 1	.04½	@	.05½
Manila No. 2	.03¾	@	.04
No. 2 Kraft	.05¾	@	.06
No. 1 Kraft	.06½	@	.07
Common Bogus	.03	@	.03½
Straw Board	52.50	@	75.00
News Board	38.00	@	42.00
Chip Board	35.00	@	40.00
Wood Pulp Board	4.50	@	5.00

(Carload Lots)

Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	53.00	@	55.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply			
(per roll)	1.85	@	1.95
Best Tarred, 2-ply			
(per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.93	@	2.08

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.08½	@	.09
Black Sil. in. soft.	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Washable, No. 2	.03	@	—
Fancy			
Cottons—According to grades—			
Blue Overall	.07½	@	.08
New Blue	.03	@	.03½
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08¾	@	.09
New Black Mixed	.03¾	@	.04½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.96	@	2.00
Writing Paper	1.65	@	1.70
No. 1 Books, heavy	1.50	@	1.60
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common Paper	.50	@	.55
No. 1 Mixed Paper	.65	@	.70
Straw Board, Chip	.65	@	.75
Binders Board, Chip	.65	@	.75
Overissue News	.90	@	.95
Old Newspaper	.70	@	—

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2—			
Repacked	.03¼	@	.03¾
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.13
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05½	@	.06½
No. 2 Kraft	.03¾	@	.04½
Common Bogus	.02	@	.02¾
Delivered New England points			
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip			45.00
Single White, Patent Coated Newsboard Bender	67.50	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00

(F. o. b. Mill)

Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.55	@	1.60
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.20	@	1.25
White Blank News	1.70	@	1.75
Old Kraft	1.85	@	1.90
Print Manila	.80	@	.90
No. 1 Mixed Paper	—	@	.55
Overissue News	.70	@	.85
Old Newspapers	.60	@	.70
Box Board, Chip	.55	@	.60

Bagging

(F. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.50
Manila Rope—			
Foreign	3.50	@	3.75
Domestic	4.00	@	—
Mixed Strings	.90	@	1.00
Jute Wool Strings	—	@	1.00
Scrap Burlaps	1.50	@	1.60
Scrap Sisal	1.60	@	1.80
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	1.90	@	2.00

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09	@	.10
Silesias, No. 1	.06	@	.06½
New Unbleached	.09½	@	.10
Fancy	.04	@	.04½
Washable	.04	@	.04¼
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04½
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08¼

Domestic Rags (Old)

(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	—	@	2.50
Thirds and Blues—			
Repacked	2.00	@	2.15
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.55	@	1.60
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.25	@	5.40
New Checks & Blues	4.25	@	4.50
Old Fustians	1.90	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

Pulp

(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.11½	@	—
Fancy Shirt Cuttings	.05¼	@	—